THE COSMOPOLITAN.

From every man according to his ability: to everyone according to his needs.

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By P. Toussaint.

" Omega," page 328.



By Jean Paul Laurens.

" Omega," page 314.



By O. Sannier.

" Omega," page 323.



* Sigurd the Crusader (1103-1130) and Eystine (pronounced I-stine) (1103-1122) were the sons of King Magnus Barefoot, and both kings of Norway. It was a custom in those days, and a frequent form of social entertainment at banquets and festal assemblies, to engage in such contests of wit and comparisons of merit as the one which is here described.



King Sigurd (with restrained anger):

A maid, in sooth, was he who slew the lion
Beneath the burning sky on Afric's coast!

A maid was he who scaled the walls of Zion,
And bathed in blood the unbeliever's host!

When down I smote the crescent where it flaunted
From tow'ring rampart; when, mid cheers of men
And bugles' blast the hallowed cross I planted,
Where wast thou, brother mine, where wast thou then?

King Eystine (with devout ardor):

I builded churches where the blessed token
Of Christ's salvation, shining o'er the snow,
The soul's dark spell of night had never broken,
Where Norsemen groped in gloom of sin and woe.
No bugles sang my praise, no voice did cheer me;
No shouting host did thrill my heart with joy;
But God alone, who saw my toil, was near me—
I builded land, whilst thou didst land destroy.

King Sigurd (in exulting retrospect):

Yea, slay, destroy! The steely swordgleams flashing,
And battle's joy that nought but blood can 'suage!

The shrieks, the groans! Strong lance and buckler clashing!

"Oh, Allah, free us from the Norseman's rage!"

Yea, that is life! My saga writ in terror

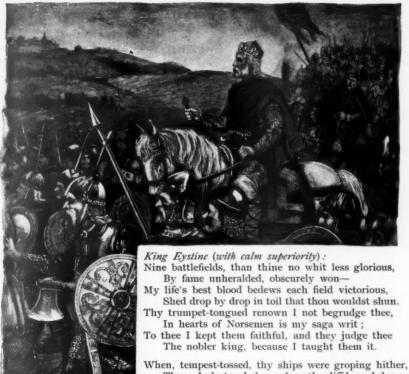
Of flaming runes across the storm-swept sky!

Down, down, my brother, kneel! 'Thou art in error!

God's scourge, the war-lord, Norway's king am I.

King Eystine (remaining quietly sitting):
While thou didst speed poor souls in writhing anguish
Down to the yawning pit of midmost hell,
I strove to brighten lives in fear that languish,
And succor those whom evil chance befell.
I builded bridges o'er the foaming river,
And roads o'er mountain wastes where scarce of yore
A wonder could the hapless wight deliver
From grisly Death, that lurked his path before!

King Sigurd (sarcastically):
Yes, mighty deeds are those! From dying ember
Thou blowst with ashes mixed a paltry flame.
And dreamest thou that saga will remember
Such trifles to inscribe on scrolls of fame?
Nay, what hast thou to set against the glory
Of victories nine emblazoned on my shield;
What 'gainst the trumpet blast of song and story,
With which my Norway's name world-wide I pealed?



Through sleet and gloom along the cliff-bound shore, And hardy hearts within their breast did wither, As Death's chill breath they felt amid the roar; A light shone out that flickered not nor dwindled, A land-locked harbor twinkled 'neath the sky-That radiant star of rescue I enkindled, That friendly harbor, brother, builded I.

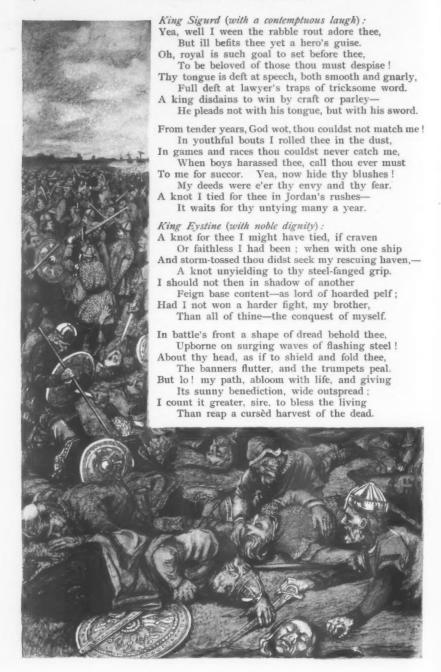


King Sigurd (somewhat abashed, but yet bravely): Yea, be it so; I reck not to diminish Thy scanty praise. Nay, prithee, set it forth! Thou buildedst harbors! Didst a beacon finish! I was myself the beacon of the North. I swam the Jordan; in the Holy City, Where Christ wrought miracles and waked the dead, I humbly walked, my soul dissolved in pity, And bitter tears at Calvary I shed.

King Eystine:

In golden armor clad and royal splendor, O'er holy places thou didst idly roam. In sleet and snow, with bleeding feet and tender, I strove to tread the Saviour's path at home. I helped the friendless, curbed the strong, the greedy, Spread o'er the weak the law's protecting wing;

The lowly folk, the hungry, poor and needy, Will not forget that I was Norway's king.





BY CHARLES DE KAY.

THE fair at Chicago is one of those events which are rightly regarded as dates in the history of the fine arts from which to reckon. In all branches of the arts it is an occasion for taking note of progress or decline. Its effect on all branches cannot be easily overstated, for not only are the Europeans anxious to confirm in their own minds and ours that superiority in which they believe, and for that purpose they are careful to make the very best showing possible, but we ourselves are interested in learning what our own position is without regard to foreign rivals. This is the first complete chance that has offered itself for such a purpose since 1876.

The World's Fair, then, is a turning point in the fine arts for the nation. What argument shall be drawn therefrom it is too soon to read, but

meantime the course of events in the art-world of New York, which every year occupies more nearly the relative position in the arts that Paris holds to the European continent, may be studied with profit as an introduction to the greater problem offered

at Chicago. For New York a turning point in the arts is already passed by the establishment of the Fine Arts Society on that tripod, the legs of which are the Society of American Artists, the Architectural League and the Art Students' League.

Writ large on the façade of a new building in West Fifty-seventh street are the names of three members of the big family of arts, the aristocrats of the family-Sculpture, Architecture, Painting. The structure itself, not less than the exhibits which it displays from time to time, reveals the strength and weakness of our art, its cleverness and provincialism, its bustling alertness and inherent tendency toward compromises. It lacks originality; it lacks character; but stands there in proof of our skill for organization and the business faculty of the average citizen. Moreover it is part of a movement started by a few American artists more than a century ago, which has influenced England and



RICHARD M. HUNT.

France and had its reaction—a movement that tends more and more to a de-

mocracy in the fine arts.

Rumford, Copley, Benjamin West and other colonials of less note were the forerunners of this democracy, though they frequented courts and aristocrats. They brought with them American inventiveness, talent for organization and indifference to rank. The colonies that America plants today in the great capitals of Europe continue the same silent work unknown to, unsuspected by themselves: they have profoundly changed the Parisian art-world, which has regarded them good-humoredly as promising pupils, destined never to attain greatness; and their sway in London is all the more powerful because they do not seek to lead. Even Munich, even Berlin, when examined from the point of democracy in the art-world will be found altered in accordance with ideas which sprang into being here during the last two centuries.

Our art has much chiaroscuro, so to speak; the lights and shades are very strong when carefully considered. To



FRANK FRENCH.



GEORGE F. INNESS.

offset the good that lies in organization, our art shows itself lacking in self-confidence, so far as the individual is concerned. One despairs of this republic of the arts when one notes how slavishly the greater part of our architects, sculptors and painters echo European thought, follow European methods, copy European subjects. Yet the intelligent way in which our artists engage citizens to come to their exhibitions, to establish prizes and scholarships, and help build structures which in other lands are the care of a paternal government, is certainly worthy of praise. It is true, however, that much of this activity is employed at the expense of time and trouble which might, perhaps, have been better employed by



THE FINE ARTS BUILDING.

the individual from a selfish point of rank are brilliant and enterprising. They

Here is a paradox. Although the artists of Europe have attained their present independence, thanks to the initiative of Americans; yet the Americans are ever forfeiting their right to express themselves and the ideals of their land through the arts, because of an exaggerated deference to the technical methods of Europe!

But let us look closer at the situation today, taking as the most fruitful example the state of affairs artistic in New

The death of Richardson left that city architecture, but the men of the next agitated in design.

are building the most important edifices not under the direction of the federal government, in Boston, Chicago and Baltimore, in Newport, the west and the south. The citizens of New York have emerged from the period in which no one dared to assert an individual taste, but sought with a fatal instinct the ugly and commonplace in their dwellings and shops: The reaction from brownstone and brick, with an unsatisfactory marble to indicate special luxury, has been too swift perhaps; at first the tendency was to fronts not only lively in color by comwithout a powerfully original mind in parison with former architecture, but

narrowness of Manhattan island and the consequent cost of land. Streets and avenues are not broad enough to show off buildings, and especially of late the relations between height of buildings and breadth of street have given much trouble. But the problems offered by the enormous loftiness of buildings, their narrowness of front and the need of having solid founsolved with more or less success. This city and profoundly altered the appearance of other cities of the Union and of Canada. New York, approached from the bay, is very different from what it was twenty years ago. In the upper part of the island the evil of narrow streets is lessened and some attempts are made buildings are erected. We have hardly much the same style, as in Paris, or Vipreconceptions as to the right proportions for a building must be changed

The city has always suffered from the have height and depth without breadth.

Although our seaboard cities were laid out under conditions that meant a paternal government, the hold of foreign monarchs was always very superficial. This was peculiarly the case of New York, whose underlying forces were Dutch and Walloon, and as such opposed to thrones. aided by dissenting English, who thought more of Cromwell than a king. Governdations and a well-knit structure, have been ors who represented British monarchs were not able to establish a lasting mark solution has changed the aspect of the like the Castle in Dublin, for instance; so New York never had a center for architecture such as many capitals of Europe possess. Its fine buildings are scattered; even the city government has been able to draw about the city hall only a small number of important structures. There is no chance for a concerted effort by while laying out streets and parks to which whole squares and avenues are foresee what the results will be when lofty often lined with pompous edifices built in begun to realize, in fact, how much our enna, or Munich, or Berlin, or Rome, or London.

But it is much to have introduced light by accustoming our eyes to edifices that brick and tilework, stone of colors other



THE "HEAD" CLASS AT THE ART STUDENTS' LEAGUE.



AUGUSTUS ST. GAUDENS.

than the flat, dry brown, or the marble most cases a compromise is the result. that soon becomes dingy. It is well to see towers used for other purposes than belfries. Unfortunately it is a fact that architects lean with both hands on European precedents, often merely distorting and in their copy making the originals This eclecticism gives the city infinite variety, but, after all, it is a concession on the part of the profession, and an easy concession to popular timidity, such as we unhappily discover far too much of in the other arts.

An architect's position toward his client is complex. It is only fair that the views of the latter-his whims, idiosyncrasies, preconceptions and preferences should work themselves into the building for which he pays and in which he may intend to live. But the architect ought not sacrifice his own artistic self-respect by agreeing to plans he thinks ugly, foolish, unworthy of his own fame. Rather than that he should ask his client to In New York and the country at large seek a more accommodating designer. In the guild of architects is large, powerful,

A worse policy than too great weakness to compromise is the willingness of architects to accept more commissions than they can give their undivided attention to. As soon as their names become known, even through a building which is absurdly inadequate for its purpose, or a very triumph of ugliness, they are pelted with commissions by persons who regard the existence of these foolish or ugly buildings in the light of a guarantee of their standing as professional men. Overwhelmed with business by clients who cannot tell good from bad, architects accept everything and turn over the designs to understrappers or smart young students. Sometimes they are lucky and the student produces a design, which, if it lacks originality, has a certain measure of beauty cribbed from the standard books. Architects are constantly failing to give the best that is in them by reason of having attempted too much.

through study and travel, one might say almost learned; but is still in thrall to

awe of European models.

Compared with architecture and painting, there is less intelligent encouragement for sculpture, but a very large demand for monuments. Unwieldly size and a monotony in marble and bronze are partly the causes for this; but most men fail to see in statuary the fine distinctions which make one statue commonplace and worthless, another a work of genius. It rarely occurs to a rich man to help the student who has a leaning toward sculpture: travelling scholarships are founded for painters and architects alone.

In view of this fact it would seem natural that New York should surpass other cities in statues, not merely as to number but quality; such, however, is far from Chicago and Boston obtain more statues from Augustus St. Gaudens, while Hartford, Conn., and Portland, Oregon, show themselves more appreciative drawn many of our best men to the dec-

progressive. It is becoming enlightened, oration of the World's Fair, a movement of double excellence and for this reason: at the World's Fair they have met each many fusty prejudices and too much in other and through sympathy and emulation received one stimulus: then through the kind of work demanded of them they must gain another.

> American statuary has been paralyzed by its separation from architecture, its natural background or surrounding, but at the fair the office of sculpture is to decorate certain walls, niches, pediments, The placing of the roofs and bridges. edifices, their color, the distribution of light, the proper proportions of group to size of buildings-a thousand questions vital to sculpture—had to be answered at the fair. Nothing could have been more useful to sculptors just now when so many students are blossoming into professors.

Sometimes American republics or foreign admirers offer New York statues of their famous men modeled by their own sculptors, never dreaming that the city would like the privilege of designating the sculptor. In truth foreigners are proof O. L. Warner. Just now Chicago has foundly convinced that America is too commercial a country to know anything



FINE ARTS GALLERY.



A CORNER IN THE PREPARATORY ROOM-ART STUDENTS' LEAGUE.

timidity of our patrons and artists materially contribute. Such gifts cannot be well rejected without brutality. largest statue in America, Liberty Enlightening the World, was a gift from Frenchmen and American residents abroad; one of the smallest in New York, the statue of Garibaldi on Washington square, was the gift of Italians in New York, and so is the far more ambitious shaft and statue of Columbus. An ordinarily robust imagination will not be strained to conceive of better things in their place. The Robert Burns and equestrian Bolivar, which were introduced into Central park, do not attain even so low a level as these. Recently the park commissioners have appointed a committee of sculptors to report on the statuary in Central park, and changes may take place, the worst specimens being shifted to less prominent spots.

Sculpture is far too little used in the decoration of private dwellings and pub-

about the fine arts and they import dread- lic buildings. There is great lack of ideal ful objects with the naïf certainty that work in sculpture, perhaps because so they are doing us a favor. To this the many have attempted and failed. Even good genre work in statuettes and groups is scarce, the only sculptor to practice it The with success being John Rogers. The void is filled by French bronzes and Italian terra-cottas, mostly poor. Hence, the present writer has been urging the foundation of a society of sculptors to educate the public and assert the rights of sculpture in the household and the marketplace. Such an organization has just been formed in New York.

In the early revival of painting in New York one factor is the portableness of the framed pictures and the little space it takes in dwellings; another is the innate love of color found in children and in men and women unspoiled by critics who prefer head to heart and try to force the arts into logical sequences. A third factor is its adaptability to the pockets of the public; a fourth, which should not be underrated, is the ease with which pictures can be sold. Moreover painting is an obvious art, fitted for display at exhibitions-per-



O. L. WARNER

chance too well fitted for its own health!
—and one which is able to touch life in a
thousand ways, humdrum and otherwise.
It has a pot-boiling department in portraiture which enables its professors to exist.

It is an art of the greatest versatility to express color and form, and in competent hands may be used to expound the deepest and highest thoughts, whether subtly, by means of pictures of nature at large, such as landscapes or marines, or more obviously and understandably, by means of figures in action or in repose. Especially it does not express thought merely for the moment, like the drama and music, but comes close to literature in permanence. Painting is, indeed, a development, a powerful shoot from the same taproot as literature; for pictures antedate writing and at the origin of every letter of every alphabet in the world in all probability lies a picture.

More than that, pictures may be spared by the ignorant when they are burning books. So many are its sides, it can exist during epochs bare of idealism and of thought. It appeals to the coarse and the stupid, like a plant so constituted as to flourish in the Dismal swamp and the Alkali plains, under Mexico's burning sun and the snow crusts of Labrador. Indeed painting is so varied and adaptable that when one says art—most people think of colored canvas and nothing else!



SOUTHEAST CORNER OF THE FINE ARTS GALLERY.

painting has been, with us, an elegant their own countrymen. accomplishment, taught with no definite idea of its application to real life, but culties of their work that they rarely simply because, in the past and among nations called civilized, it was thought a fine thing to be a scholar. As our colleges continue to drill boys in grammar, rather than make the dead languages live this direction as to make a virtue of their for them again, so the majority of persons failing, and maintain that process is all,

creatures of routine, who employ themselves with the arts because the men of the past thought highly of such things. Few go so far as to ask, frankly: to what end? Why this way, and not that? Is there aught to say? And, if so, what should be said?

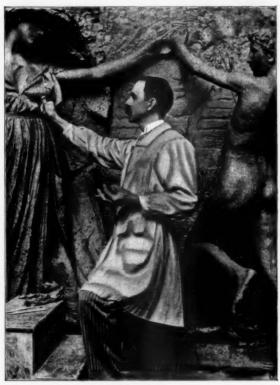
Our connoisseurs do not stimulate artists to produce work of higher imaginative power, nor, by an instant recognition of fine thoughts clad in poor garments of paint, support the youth who dares to raise himself above the level of imitators and safe conventions.

On the other hand neither do our artists show themselves so brave and independent as we might expect. On this side of the ocean they support hard fare and neglect with difficulty: many betray the weakness of their moral fiber by deserting their own land for countries which offer a deceptive appear-

ance of encouragement for art. That encouragement, if it exist carries the attention from the true point. in the measure and healthfulness they suppose, is not for them, but for the natives, who understand far better than a foreigner the ideals of their own people, and can express them as no alien may. They do not work for the glory of their made much of, given in the newspapers homeland; they lack the stimulus of such advertisements as no other prolabor for others than themselves; the fessionals enjoy, save actors, and, unlike

Hitherto, like the classical languages, cess are personal, not to be shared with

Artists are so oppressed by the diffihave time to fortify their minds by study and reading, often no time to think properly over the subject they shall paint. Later broods of artists have gone so far in enjoying and practising the fine arts are while subject is merely a false step, which



D. C. FRENCH.

The painters, indeed, may be called the

spoilt children of the community, who are permitted all sorts of licenses no other citizens enjoy, are sent abroad for their education, are flattered by society and glory they aim at and the pleasure of suc- the actors, are never asked for a return



WINSLOW HOMER.

for such notice in any way. Museums are built for them and stocked, schools established, prizes founded, travelling scholarships maintained. And, in this country all is done by the community, by private hands-not, as in Germany, France and England, by governmental system and grant.

And, after they have enjoyed all these freaks of fortune, are they grateful? Do they turn out better citizens than youths West crossed the Atlantic and becoming who have no such helps, but must a popular painter at the court of St. earn every dollar and sweat for every James's, got from the king the charter of

little step upward? They live abroad and interpret foreign ideas to foreigners. To reconcile their consciences, they hail the phrase "Art has no country." It would be better said "Every country has its own art"and one of the countries which should have its art, and indeed has it, after a groping fashion, is America. Now at the head of American art stands the painter's guild in New York.

But there are other reasons for discrimination against native painting which cannot be laid on the broad shoulders of the public. Absorbed in

the difficulties of learning how to express himself, the native painter too often discovers at last that he has nothing to express. Into no profession more than painting do fools rush in where angels fear-and the ranks are filled with men and women who have deft fingers only. Never before has the art of instructing mediocre brains to paint reached such a height as in Paris today, partly because the logical French mind has torn away the veil of mystery that once gave a charm to the art and made waverers hesitate, partly because the wave of realism carried with it the suggestion, if not the claim, that anybody could learn to be Rembrandt by learning how Rembrandt used his brush.

On a smaller scale, the same thing has occurred before in the history of the arts; only on its surface is the situation novel. But we cannot escape the fate of former generations of imitators, although steam, photography and electricity bring countries closer together. Indeed, our case is worse, because the flood of European immigration constantly introduces disturbing elements and postpones or modifies the expression of national feelings and ideals. Whether they wish it or not, the artists of any land are forced to be one outlet for such expression.

In the last century, when Benjamin

the Royal Academy and installed Reynolds as president, such art as existed here was of necessity colonial and English. So it remained through the early half of the present century, though England was thoroughly detested for her tyranny on the ocean, and efforts were made, sometimes with success, to have France the favored exemplar for architecture, costume, the arts, customs. It is true that England, at that time, had greater artists than she has shown since. If the National Academy of New York published the birthplace of its members, living



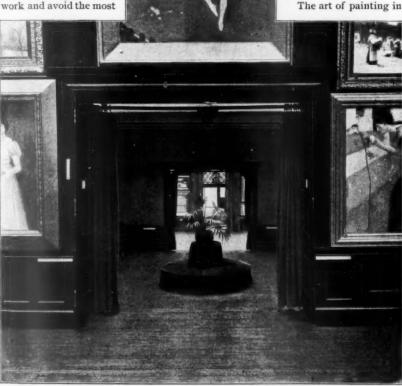
islands. The Royal Academy has always been the model for the National, and that is one reason for its present stagnation. In so far as genre paintings are concerned, that British influence is still powerful in New York today.

The monopoly of easel-work makes peo-

orative. To keep it healthy and of proper strength, it should have touch with architecture. This trouble bids fair to disappear with the demands made on artists in the great cities for the embellishment of private houses and hotels; in time they will learn how to do large effective

and deceased, it would be a surprise how flagrant sins against taste. An error in large a number were born on the British painting which springs from a kindred root is the exhibition picture, especially rampant in Paris. This is a picture designed, primarily, to startle the jury or convince them that the great public will be startled when they see the canvas. The exhibition picture is painted for no other place than the walls of a gallery, ple forget that painting is originally dec- where it has to wrestle for notice from

critics and the public. To encourage large work and embellish the city, amateurs and artists of New York have just founded the Municipal Art Society with R. M. Hunt as president. Properly pushed this club may do great things for New York and the arts.



THE HALL OF THE FINE ARTS BUILDING FROM THE VANDERBILT GALLERY.



WILLIAM M. CHASE.

water-colors, always in rank second to men and workwomen, skilled in colored oils, has taken great proportions in New chalks and crayons. But of these none York; the exhibition of the local water- devotes himself exclusively to pastel. color society being always crowded and Water-colors are perhaps the most popular patronized by purchasers, while minor of any art in New York. They attract exhibitions also flourish. Paris alone from two camps of the amateurs-those shows equal strength and variety in this who love color, and those who are not charming branch of the arts. has vastly more exhibitions of water- in the finer sense of the word. They are colors, but these bear the stamp of hope-charming rather than deep, and satisfy less mediocrity. Art amateurs here could thousands who do not wish to be moved not support their unspeakable commonplaceness. Much the same story may be told of English pastels, save that they are not numerous like the water-colors. Pastels seem never to have taken in England except temporarily for portraits. Two Americans, Whistler and Hitchcock, may be said to have introduced pastels when they reasoned that color was the as an art again into England. In New great thing, and that artists not richly for some time and their exhibitions, while be doing something else. France has denot successful like the water-colors, show creed to Mr. John La Farge not only medthe presence of half a hundred work- als, but the ribbon of the Legion of Honor

London able to see what is and what is not color or instructed but merely cheered.

Our stained glass and engraving on wood have a manifest and acknowledged superiority to the European work which is not yet claimed for painting and sculpture. The revivers of stained glass in New York struck the heart of the matter York a society of pastellists has existed gifted with the color sense might better for the surpassing beauty of his stained wits and that you have become an Ameriglass work. Space forbids a description of recent work in bronze, wrought iron, carving, tiles and porcelain, in carpets and rugs, in book-binding and embroidery, which might be adduced in proof that the arts as applied to industries are beginning to show great vitality in New York.

A turning-point seems reached in all branches of the fine arts. At Chicago it is possible to measure somewhat the situation and decide on our deficiencies. But the problem is really as plain in New York where the art of all the world flows in, making of that city a second London in the way of a mart for all portable objects of virtù.

The duty of our amateurs is to search for those artists who are expressing themselves like natives and to say to those who speak a foreign language in the arts: "When you can show that your training abroad has not been too much for your

can again, I will attend to you."

It is impossible to expect art to flourish naturally in New York, if the artists are foreign-taught and of foreign residence. "Art has no country" is a phrase coined in France, for the encouragement of pupils and residents from other lands, since it blinds them to the obvious fact that a nation must express itself, if at all, in the terms and after the ideals of its own people, and to the other fact, that to express itself in the terms and after the ideals of another nation is a mere waste of energy.

A proof of this is seen in a moment, when one considers which branches of the fine arts reflect most credit for originality on New York artists. These are not painting or sculpture, which by reason of portableness have been submitted most to the influence of European art, but stained glass and engraving on wood, which, for various reasons, had less to



NORTHEAST CORNER IN THE VANDERBILT GALLERY.



THE FINE ARTS BUILDING AT THE WORLD'S FAIR.

battle with. Moreover paintings, statuglass and mosaic, tile work and terracotta—these are better suited to the stage of appreciation reached by a large majority of the inhabitants of our towns, and to whatever of feeling, of thought and of skill resides in them. So far, however, the city and its wealthy men have not taken sufficient thought for the develop-

ment of the subordinate branches of the fine artssubordinate merely by virtue of the need of cataloguing the arts, since the great artist may appear with great works at any point on that list.

Here one may note, however, the beginnings of something better in the struggle for existence of such a school as the Institute for Artist Artisans, which has the makings of an industrial university more effectual than similar undertakings in Philadelphia and Chicago. This plan should be actively supported and enlarged.

The fact that New York has reached a ary in alliance with architecture, stained liberal stage in the opening of museums on Sunday shows that we are at a turning point. The fine arts have become so prominent as a means for employing people's leisure innocently, taking their minds off the inevitable ills of life and improving their natural facilities, that theologians and men of the higher education have to consider. Those who care

nothing for the fine arts are surprised at the crowds that pour through galleries and museums, and at persons who give great sums for a work of art. It is hard for them to understand that there is no fashion or pretense in such phenomena, but that such things give pleasure as enthralling as wine or delicious food, and leave no mental gout behind. In time, however, they may discover that such pleasures are even more keen and abiding than those of the senses. They will perceive that the root of art-love



resides in all. This phenomenon should be firmly grasped by those to whom art is distant or suspect. There are many persons in whom religious feeling is quite naturally lacking; we see them in great numbers now, merely because public opinion no longer bullies them into an assumption of godliness. For them the arts provide a substitute, which may not boast so obvious a purpose to regulate their morals, but may perform analogous feats nevertheless. And is not art like religion in taking the mind from the crass earthy and leading it into realms of feeling and thought superior to the common round of self-seeking and animality?

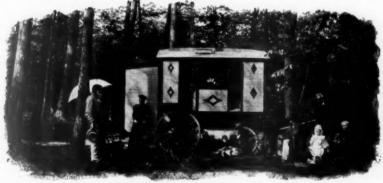
In New York, and therefore in the United States, the fine arts have gained this much by eclecticism, that no school can ever exercise its tyranny over artists and crush individual expression; next, they are rising superior to fashions merely European, not worthy in themselves; and thirdly, they have freed themselves from the tutelage of religion. They propose to help religious men, not be their slaves and victims, appealing more especially to those who cannot be touched by dogmas and exhortations, but can be moved through the eyes.

One word more as to the art of New York. Its local and special vice is a colonial timidity before the approval of Europe. Its chief lack is that which sterilizes art everywhere; it is that which renders worse than useless nine-tenths of the objects accepted for art: the lack of imagination. Art is largely convention—only partially is it exact imitation; like poetry, and like acting, its enjoyment lies, far



more than we suspect, in the exercise it gives our imagination.

The genre picture that tells a story at the first glance, may be exquisitely painted, and as such delights the connoisseur as well as the public—that is, merely as a painting; but it will not give the connoisseur so much pleasure as some pearly landscape, with little incident or none, but so painted as to form a ladder for his imagination. Art that sets the fancy roving is more to the connoisseur than the most perfect of paintings, the most preciously wrought interior by Meissonier.



"WESTWARD THE COURSE OF" ART-



1859, as Le-

land Stan-

ford was passing the

store of Col-

lis P. Hunt-

SENATOR LELAND STANFORD.

ington in Sacramento, California, he saw a huge freight wagon drawn by twenty mules pull out for the Comstock mines at Virginia City. He walked into Mr. Huntington's counting-room and broached the subject of a railroad that would be able to transport heavy merchandise to the mines of Nevada, and that might eventually be extended across the mountains to join with roads coming from the East. That night Mr. Huntington called at Mr. Stanford's residence and they talked over the matter, paying particular attention to the transcontinental idea, which by its brilliancy and magnitude bewitched them both.

The Southern Pacific company is organized under the laws of Kentucky, where it has no property interests whatever, presumably to give it the status of a foreign corporation in the states in which it operates, and therefore the right of election to sue or be sued in either the state or federal courts of the various districts. It embraces, by construction, or lease of purchase, nineteen distinct railway concerns, and generally speaking, as appears from



the map, four divergent lines of road, - one from Ogden to San Francisco, a distance of 895 miles, the second, from New Orleans to San Francisco, 2492 miles; the third, from Portland, Oregon, to San Francisco, 772 miles; the fourth, from Spofford, Texas, to

from Spotford, Texas, to

Ourango, Mexico, 521 miles; and be-cated by such men as Webster, Benton, grand total of track aggregating 6782 miles. The various leading railway corporations embraced in the Southern Pacific company, are, in the Pacific system, El Paso, the Central Pacific railroad, miles; Portland and Northern, 390 miles; California Pacific, 115 miles; Southern Pacific of California, 1477 miles; Southern Pacific of Arizona, 384 miles; Southern Pacific of New Mexico, 171 miles and South Pacific Coast, 104 miles. In the Atlantic system, including the territory east of El Paso, the Louisiana Western. 105 miles; Morgan's Louisiana and Texas, 283 miles; Galveston, Harrisburg and San Antonio, 936 miles; Texas and New Orleans, 104 miles; Sabine and East Texas, 103 miles; Texas and Mexican, 91 miles, and Gulf, Western, Texas and Pacific, 111 miles.

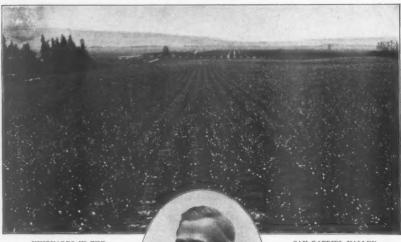
In addition to these railroads, the com-

lines covering water routes of 7276 miles, making a grand total of 14,058 miles.

The very great importance to the nation of a transcontinental road that would more securely unite the East and the West, had all along been advo-

sides these forty-four smaller branches Frèmont and others, who manifested inand connections along the main lines, the terest in Pacific coast affairs in pioneer days. In fact the question has been agitated not alone on account of financial benefits to be derived, but it was deemed highly politic to more closely cement including the territory west of Ogden and the Pacific slope to the interests of the nation, and especially to add its area to 1360 miles; Oregon and California, 554 the list of states opposed to the South. The southern leaders held that a railroad across the plains, opening a direct communication with the free states, would operate to the disadvantage of their plans, by giving political strength, and the control of the mineral wealth of California, to the North. Hence their persistent opposition in congress to the great Pacific railroads.

The growing conditions of the western slope demonstrated, however, the absolute need of having a more direct and speedy connection with the Atlantic states. necessity of passing through, and being subjected to the uncertainties of, a foreign country, and the thirty days required for pany also owns and controls steamship letters and business advices to reach their



VINEYARDS IN THE

destination, caused California to be in comparative isolation from the world; and so, by degrees, a railroad across the continent began to be earnestly talked of and its feasibility considered.

The general government foresaw that in the event

MARK HOPKINS mercy of foreign fleets, and in 1854 con- of the road.

the construction of a railroad and telegraph line from the Missouri river to the Pacific ocean, a distance of about two thousand miles, and crossing the Rocky \$32,000 per mile. and Sierra Nevada mountains. The centhe Central Pacific Railroad company.

By this act, the latter company was re- the most potent factor in bringing about

SAN GABRIEL VALLEY.

quired to complete and have accepted forty miles of railroad before the government gave its aid. Subsequently the statute of 1864 changed this to twenty miles, and there was also given to the company each alternate section of unappropriated land for

of war, the Pacific coast would be at the a distance of twenty miles on both sides The government agreed gress instituted a commission to survey to loan its own thirty-year bonds, bearthe probable field for a railway in the uning interest at the rate of six per cent. inhabited country west of the Missouri per annum, to the company. These were to be delivered as follows: on the first The first Pacific railroad act was passed seven miles east from Sacramento, at the by congress July 1, 1862. It provided for rate of \$16,000 per mile; on the next one hundred and fifty, being over the mountains, \$48,000 per mile; and on all the road built further east, at the rate of

Foremost in securing this aid for the tral division was given to the Union Pa- company was Aaron A. Sargent, member cific Railroad company, while the con- of congress from California, afterwards struction of the western division, or that United States senator, and Schuyler Colportion between the Pacific coast and the fax, representative from Indiana, and later eastern boundary of California, and from speaker of the house of representatives in thence on until a connection should be 1864. It is interesting here to note that formed with the road in the course of con- the question of the defeat of Sargent in struction from the East, was assigned to 1884, for reëlection to the senate, and the choice of Leland Stanford as senator, was



CREED HAYMOND.

MOUNT SHASTA FROM

the latter's memorable disagreement with his chief associate, Mr. Huntington.

Soon after the first consultation alluded to, between Stanford and Huntington, Mark Hopkins, Charles Crocker, and T. D. Judah were brought into the conference, and it was

with this personnel that a beginning was made and the necessary legislation secured. The fortunes of all these men combined did not at that time aggregate more than \$400,000.

The original officers of the Central Pacific were: Leland Stanford, president; C. P. Huntington, vice-president; Mark Hopkins, treasurer; T. D. Judah, chief engineer; E. B. Crocker, attorney; E. H. Miller, Jr., secretary; and these, with L. A. Booth, D. W. Strong and Charles Marsh, constituted its first board of directors.

The value of the lands given to the company is hardly susceptible of accurate valuation, while the government bond issue amounted to \$27,850,000 in currency. The company issued first-mortgage deloan, making a fund for construction, consisting of the apparently large total of

THE SCOTT MOUNTAINS.

premium on gold, and from other causes, the company realized from these bonds only \$41,480,000. This amount, obtained from these two sources, went into the prosecution of the work. Other assistance was rendered the enterprise; San Francisco, under

permission of the legislature, contributed the sum of \$400,000, and aid was also given, in lesser amounts, by various other cities and counties.

Mr. Judah, who advanced the undertaking, both in the field, by his accurate surveys, and by furthering legislation, estimated, in 1862, that the yield of timber from the land grant in California alone, and its sale, would exceed the sum of \$160,000,000. The freightage, to the company, on this timber and lumber, was computed by him at \$100,000,000.

The first work was done January 8, 1863, when Leland Stanford, removing his gloves and coat, deposited an entire load of sand and gravel at the foot of K street in Sacramento. That city had always been conceived as the western bentures in an amount equal to the federal terminus of the road. It was contemplated to use the waterways from this point, down the Sacramento river, to San over \$55,000,000. But, by reason of the Francisco, as at that time the débris from



hydraulic mining had not impaired the usefulness of this river for commercial purposes. The first fifty miles were completed prior to September 1, 1865.

It was found, by surveys made in 1854 and continued through 1856, that the only serious obstacle to this great

rational work was in the bold front belt.

and steep wall of the Sierra Nevadas. length than snows and reaching into the clouds—
could they be passed? This engineering problem, at that time considered almost impracticable, was attempted and position solved.

CHAS. CROCKER.

CHAS. CROCK

The highest point passed was 7516 feet above sea level. For protection against winter blockade, snow-plows were invented, and an expensive system of snowsheds was constructed, thirty-seven miles in length, and involving an expenditure of over \$2,000,000. Even these measures have since proved ineffectual, the snow often falling to a depth of more than six feet in a single night and impeding travel for weeks. Solid as these structures are, still, so terrible are the mountain storms, that drifting snow will penetrate and fill them, and sixteen first-class locomotives are frequently necessary to use behind a single snow-plow, in the work of cleaning the track.

In fact, so expensive and laborious has quired by the acts of congress.

been the maintenance of these sheds and the operation of the line in certain winters, that the company have seriously contemplated the construction of a tunnel under the Sierra Nevada mountains, and the throwing of the road below the deep-snow

belt. This tunnel would be ten miles in length, and today it could be built for less than \$5,000,000.

Up to 1865, the work progressed slowly; but, certain bond litigation of the company having resulted favorably, and its position being better assured, it was determined to vigorously push the road to completion. A call was issued for 5000 laborers, and from that day, continuously until the driving of the last spike, every able-bodied man that could be procured was kept constantly at work, until the force employed, under the supervision of Charles Crocker, aggregated over 15,000 men.

It is interesting to note that the greater portion of the laborers engaged by the company were Chinese, and Mr. Stanford, in his first official statement to the President of the United States, on October 10, 1865, affirms that without them it would have been impossible to complete the western portion of this great national enterprise within the time required by the acts of congress.



The last spike on the Central Pacific was driven at Promontory, Utah, May 10, 1869, by the same hand that lifted the first shovelful of sand.

Little, then, did an expectant public or the pleased officers anticipate that, in but ten years thereafter, Cal-

ifornia would witness, in the success of the "working-men's movement" and in the adoption of the new constitution of 1879, the culmination of a long and bitter agitation against the railroad and against the Chinese-the latter issue chargeable, primarily, to the early demand for foreign labor to assist in the work of the construction of this road.

Thus was completed the Central Pacific railroad. The chief engineer, in 1861, estimated the net annual revenue from the operation of the road in California and Nevada at \$3,654,000. In an action subsequently tried in the United States circuit court for California, wherein the government sought to compel from the company its five per cent. payment, pursuant to the act of 1862, in return for the aid then extended, it was shown that the excess of income to the company, of the road, from July 16, 1869, to October This in no wise included the revenue received from the sales of part of its land sternation and alarm.

grant for twenty miles on each side of the road. Indeed, the directors admit that, up to 1888, they had received, in dividends of the Central Pacific alone, the sum of \$34,000,000.

The gross profits largely exceed this, for vast amounts have, in addition,

crocker. amounts have, in addition, been expended in betterments and acquiring branches and feeders along the main route, besides the accumulation of a private sinking fund of over \$22,000,000.

There followed, from time to time, the building and acquisition of connecting lines throughout the west and south, as business interests or competition demanded. The Southern Pacific road, from San Francisco to El Paso, through Arizona and New Mexico, was built directly by the four magnates of the Central Pacific company, and embraces 2052 miles. This road was constructed because the growing necessities of the country required a second transcontinental line through the south, and the Central Pacific management wisely concluded to anticipate others and control it themselves. Colonel Thomas Scott was largely responsible for the construction of this southern or "sunset" over disbursements for the mere operation route. In 1875, when he was pushing his Texas Pacific from New Orleans towards 31, 1874, were \$36,732,000, or considerably El Paso, and was clamoring at the doors above a profit of \$7,000,000 annually. of congress for aid and a land grant, Mr. Huntington displayed the liveliest con-The Southern



Pacific was rapidly thrown across the desert wastes of Arizona and New Mexico. Scott was encountered west of El Paso, and not only did competition cease, but Scott and his Texas Pacific were completely absorbed. connection was made by this route on January 29, 1883;

HENRY VROOMAN. and from thence to New Orleans the Mor- determine, for the reason that much of purchased, carrying with it, in addition, the Morgan line of steamers from Galveston and New Orleans to New York.

San Francisco with the great northwest, was completed December 17, 1887. Both this and the Southern Pacific lines were also aided by congressional land grants.

In the construction of these roads, and, indeed, in the diversified business of the company, there is employed the agency of numerous inside corporations, owing their existence to, and controlled by, the individual owners of the parent concern. In times of legal distress, the management has, on several occasions, taken refsystem. The Contract and Finance com-Pacific Improvement company, and Rocky Mountain Coal company, are only a few technically distinct, are, in fact, only has been before congress repeatedly.

arms of one great body. Without involving too much detail, it may be sufficient to state that the gross receipts for 1892, of the consolidated Southern Pacific company are computed at \$48,970,000, although what part of this is profit, or net income, will be difficult to

gan Louisiana and Texas railroad was the disbursement is directed to the enlargement of the system.

Pursuant to its obligations to pay to the government, annually, five per cent. The road to Portland, built to connect of its net income, and in accordance with the supplemental acts of congress, the Central Pacific company has made certain deposits in the federal treasury, and has received other credits on the mail transportation and sinking fund accounts, in all approximating \$12,100,000.

Each party to this great contract asserts equities as against the other. An important point in the controversy is the determination of net income, as basis for payments into the United States treasury. The company claim that expenditures for uge in the mysterious intricacies of this improvements and betterments of the road are to be first deducted, while a contrary pany, Western Development company, contention has been made by the department at Washington.

The matter of enforcing the governof the various entities, which, while ment's claims against the Central Pacific



GEO. CROCKER.

The Thurman refunding act has, among others, been passed, and congressional commissions have, from time to time, examined the work and made diverse reports. The United States waived the priority of its original demand, and now has only the benefit of a junior lien,

company and third persons.

and the government are involved and a matter of serious embarrassment. While built by private parties, still, the funds to assist the work were largely those of the United States. The enterprise was, therefore, admittedly of a semi-public character. When the road was completed, a commission appointed by President Grant reported, May 20, 1869, that it would require an expenditure of fully \$4,490,000 to bring certain parts up to the standard prescribed by the federal advisory board. A subsequent commission, appointed under a joint resolution of congress, reported, on October 30th of the same year, that it would require only possession and control of the road. The quirements provided for by the original act. will be a matter of moment for the con-

The government advanced, in bonds, nearly \$28,000,000 to the promoters of the road, and the interest accrued upon this sum will, in 1898, the expiration of the thirty year period, exceed \$50,000,000, or a then total indebtedness

to the government of \$80,-

subsequent, in equity, to the mortgage 000,000. The debt of the road to private bonds issued to the Contract and Finance creditors exceeds \$52,000,000, making, when consolidated with the obligations to The relations between the Central Pacific the government, the stupendous indebtedness of \$130,000,000. As against this, there is \$22,000,000 in the private sinking fund of the road, and over \$12,000,000 in the treasury of the United States, on the sinking fund and bond interest account, to the credit of the company.

Colonel Morgan, an engineer selected by the Pacific railway commission, reported that the property of the Central Pacific railroad company was, in 1888, of the actual cash value of \$110,000,000.

The remedy given the government, under the present acts of congress, for nonpayment of the debt when due, will be, in default of payment in 1898, to take \$576,000 to bring the road up to the re-enforcement of this right, in the future,



sideration of the national legislators. A mere extension of credit, however, must be ineffectual, for, as Creed Haymond, chief solicitor of the company, admitted in his great speech before a select committee of the United States senate, in 1888, under the present refunding act the government never would or could be paid. merce

But it is a remarkable fact to chronicle that even the principal of the debt of the Central Pacific, both in first and second mortgage bonds, and to the United States, exceeds \$80,000,000, a sum double the amount for which, it has been estimated, the road could at the present day be con-

The public have lately learned something of the sacrifices railroads have been compelled to make on their through freight. by the fact, that in order to avoid reduction in rates, the Transcontinental Railway association has for several years past, and until January last, regularly paid to the Pacific Mail Steamship company, an annual subsidy of \$\$00,000.

Taking the entire Southern Pacific system as a whole, and looking at the map of the lines of this company, it will appear that, with San Francisco as the great objective point, it has been the design to dies, dairy produce, fruits, raisins, oranges,

northwest as one artery; from the middle east, as another; and from the south, as a third; all centering toward the mart of the west. This includes the business of the slope, the distribution of traffic to every port and island of the Pacific ocean, and the return wave of com-

merce and travel from Australia, Mexico, China and Japan.

The freightage of the company embraces the products of every zone. The tariff from the fuel and lumber of the Sierra Nevadas, although less than originally estimated, has been the source of large revenue to the Central road. In addition, however, to through business, the great cattle ranges of Nevada, and her inexhaustible supplies of gold and silver ore, also bullion, iron, coal and granite, form the principal freight of the Central Pacific from these parts. From the northwest and Puget sound, coal, lumber, fruit and dairy produce are the staples carried. From the interior of California, both to its great seaport and to the east, a steady flow of trade, the products of the soil, of its gold and silver mines, and of manufactures, universal in variety, is maintained.

All through California, her wines, brandrain travel and traffic from the great lemons, figs and olives, are husbanded for



the markets of the world. For the present season, it is computed that over eight thousand cars of oranges will be shipped abroad, ex-

clusive of the large quantities required for home consumption.

The vast wheat yield of the state is transported to

MRS. HOPKINS the east and from the interior valleys to thus carried by rail, varying annually from 800,000 to 1,200,000 tons, is sufficient, at twenty tons per car, to form a continuous train three thousand and thirty miles in length.

From Arizona, Mexico and Texas, the chief commodities transported consist of the mining output and live stock.

The state of California has been receiving a continuously increasing influx of visitors, attracted by its magnificent scenery, and the fame of the state, and of the coast, as a health resort and as a place of escape from the rigors of the eastern This item of tourist travel is alone an important one for the railroad. Yosemite, Lake Tahoe, Mount Shasta, the geysers, the big trees, Del Monte, the watering-places and orange groves of the south, are all places recognized by the travelling public of the United States.

its inception in 1862, always remained an exclusive corporate monopoly, without change in its controlling ownership or management, except in two instances occasioned by death among its original promoters. same may be said of the Southern Pacific.

SEARLES. Four men, Stanford, Huntington, Hop-San Francisco. The average surplus kins and Crocker, have dominated the policy and career of these companies. Their names are familiar throughout the United States. The two former are still the active factors in control, and with C. F. Crocker, eldest son of Charles Crocker, and T. H. Hubbard, representative through Edward F. Searles, of the Hopkins interest, constitute the executive committee.

The present management consists of Huntington, president; Stanford, chairman of the board; C. F. Crocker, A. N. Towne and J. C. Stubbs, respectively first, second and third vice-presidents. These, with Thomas E. Stillman, Thomas H. Hubbard, Stephen T. Gage and H. E. Huntington comprise the corporate directory. The law department has, since the death of Judge E. B. Crocker, been successively in charge of S. W. Sanderson, of Creed Haymond, and then of E. L. Craig. All of these attorneys have since The Central Pacific company has, since passed away, and latterly the legal affairs



of the company have been managed jointly by Harvey Brown, W. L. Dudley, J. E. Foulds and Frank Shay.

Under Haymond's administration the company effected a saving of over \$400,ooo per year, by making judicious compromises instead of pursuing the ordinarily

accepted policy of litigating all cases. dinates and heads of departments contains many striking examples of force and ability. Such instances are those of A. D. Wilder, advanced, by merited recognition, from an humble position to that of superintendent of the western division; and Lewis Tasheira, who justly holds a high place in the engineering department of the road.

Of the four great organizers of the company, Charles Crocker was alone ordained to leave children, upon whom wealth, position and influence might be bestowed. He died August 14, 1888, his vast estate descending to a daughter Harriet, now Mrs. Charles B. Alexander, of New York, latter destined by his administrative to confirm him. He evidently then in-

power and acumen to ultimately succeed to the presidency of the road.

Mark Hopkins, upon his death, March 29, 1878, left his fortune estimated at \$60,000,000, to his widow. Mrs. Mary Hopkins, while her adopted son, Timothy, received minor benefits.

WILLIAM H. CROCKER. Mrs. Hopkins' marriage to Edward F. The road, with its thousands of subor- Searles, of Methuen, Mass., and the unsuccessful contest by Timothy Hopkins over the probate of her will, in October, 1891, wherein her estate passed almost intact to her husband, are matters of recent and extended publicity.

Leland Stanford began life as a poor boy. He located early in Sacramento, and was the first republican governor of California. He has been the controlling spirit and president of the Central Pacific always, and of the Southern Pacific until 1891. In 1884 he was elected to represent California in the senate of the United States, and was re-elected in 1890, which office he now holds. Stanford was nominated a regent of the state university and three sons, George Crocker, William by Governor Perkins, but a state senate, H. Crocker, and Col. C. F. Crocker, the hostile to corporate monopolies, refused

tended to largely assist the great collegiate institute at Berkeley, but the slight swerved his purpose, and several years thereafter, on November 11, 1885, he founded the Leland Stanford, Jr., university, at Palo Alto, with an endowment of \$20,000,000 in memory of his deceased son.

C. P. Huntington is a man of large ability, of large stature, and with the independence of strong convictions. In the famous Colton trial, in 1884, rather than compromise, although it visibly winced, the railroad permitted the publication of Mr. Huntington's letters to his deceased associate, General Colton, giving his confidential views regarding public men and public measures affecting the company.

Through differences, which it is understood were primarily of a social nature, Mr. Huntington became, latterly, antagonistic to Mr. Stanford. Under the manipulation of Stephen T. Gage, W. W. Stow and Henry Vrooman, California witnessed for years the active participation of the railroad in city, county and state politics.

Then followed at the state capitol the dramatic scenes of the defeat of Aaron A. Sargent to the senate of the United States and the succession of Leland Stanford to that honor. Mr. Huntington made no attempt to conceal his displeasure. By uniting with the Hopkins interest, Huntington deposed Stanford from the presi-

dency of the road, and took that office himself. But Mr. Huntington did something more: he announced that the company would forthwith retire from politics. So well has he succeeded in enforcing this declaration, that the state of California has just witnessed, with wonder, the enactment of the Seawell bill, compelling the payment by the railroad of \$2,740,000 on account of taxes, claimed as delinquent.

The owners and promoters of the railroad have, almost exclusively, until recently, been Californians. Their wealth and their homes are largely in the state, and one of the striking features of San Francisco is Nob Hill, covered with their princely residences.

Humanity will, perhaps, never agree in its conception of the characters of the enormously rich. Much is expected of them, and the decision must properly rest on the determination as to whether they are to be viewed as ordinary men, or judged according to the more abundant advantages which wealth has given them. They must, in large part, stand charged with the burdens and duties of a high trust, and an important problem for the future is the determination of the reciprocal rights and obligations as between the people and concerted wealth, and as between the government and great corporate monopolies.





BY ROBERT BREWSTER STANTON.

January 1890, photography had been used in almost every way in which it was possible to be of any advantage to science or art, from recording the movements of a military campaign, to catching the face of the sun or moon, and down to the snap-shot at an affectionate parting over the garden-gate, to be used, later on, in a breach of promise case. And it has been used to illustrate and record the progress of engineering works; but nowhere, it is believed, had the camera ever before taken so prominent and important a part in the

N the casions of the Colorado, prior to line and the exploration of a hitherto almost unknown country.

The great cañons of the Colorado river had been pronounced impracticable, and even impossible, as a railway route. Even though a survey were made in the usual way, would doubters accept this testimony against their own opinions? The case became one of Mohammed and the mountain, reversed. We could not take these prophets of Wall street to the cañons, hence we must bring the caffons to the prophets. How was it to be done? Photographs were taken, in such numbers, preliminary survey of a great railway all along the line of survey, as to show



Robert Brewster Stanton is a Mississipian by birth, but comes, through both parenial branches, from two of the oldest New England families—the Stantons and the Brewsters. Mr. Stanton became a graduate of Miami University, Ohio, in 187, at the age of twenty-five years, and lost not time in beginning his professional work as civil engineer on the preliminary surveys of the Atlantic & Pacific railroad. Later he served six years as assistant and resident engineer of the Cincinnati Southern railway, and then as division engineer of the Colorado Division of the Union Pacific. While in this last position he constructed that part of the Colorado Ceutral railway which includes the famous "Loop Line" above Georgetown. In the daring and picturesque expedition which Mr. Stanton describes in this article, he acted as chief engineer, and later completed the undertaking with the aid of his own financial means. Not only was this Grand cafion territory unmapped; it had not even been traversed before, except by Major Powell's party. Major Powell's party.

almost a complete panorama of the river banks and the walls of the cañons, from the head of the Colorado to the Gulf of California, a distance of about twelve hundred miles. Through the most difficult portions, these pictures were madesoastooverlap each other and leave no detail of future

construction without its negative to supplement and demonstrate the notes and opinions of the engineers. About twenty-two hundred negatives were taken in all, most of them in duplicate, and some in triplicate, which gave nearly one thousand views to illustrate the work. These, arranged in their order, noted on the maps, and connected by numbers, with all notes, are of such value as not only to convince the most incredulous of the entire practicability of the route, but also to cover the line so in detail, that, with the notes of distances and classification, any engineers familiar with rough mountain construction can make as correct an approximate estimate of the cost of such a road as if they were on the spot.

Such extended work as this, in so difficult a country, was only made possible by the more recent invention of paper rolls and transparent films. The trans-

portation of glass plates was out of the question. The rolls were soldered in tin boxes and packed in rubber bags. As each roll was exposed, it was again soldered in the tin boxes, and the duplicates carried in separate boats, for two roll-holders were used at every exposure and the duplicates taken on different rolls. It is a notable fact that, while the president of the railway company and two boatmen were drowned, and provisions, instruments and boats destroyed, not a single negative



A TYPICAL CAMP

was lost in the river. Of course, great care was taken to preserve them: yet it is almost marvellous that during the many disasters and mishaps this most valuable evidence should have been kept from even being wet.

This suggests the extent to which photography may be

used, to not only carefully picture the country and the route over which a railway or other survey is made, but also to largely reduce the cost of making an accurate preliminary reconnaissance through difficult mountainous regions. A party equipped for a rapid tachometric survey could consist of only four, or, at greatest, five men, and bring back vastly more serviceable and valuable notes than the ordinary survey party of from twelve to sixteen men. Such a party would consist of:

First, the engineer in charge, who should be a man of wide range of experience rather than a minute technologist. Besides directing the party, his notes should cover the general characteristics of the country. Second, the transitman. Third, the stadia rodman, and, perhaps, a back-flagman and general utility man. Fourth, the photographer,



A GOOD PLACE FOR A TUNNEL.



MAKING REPAIRS.

who should, at the same time, be a rapid and skilled topographer, to quickly supplement his negatives with notes of topographical features of the route.

Such notes, in the hands of a competent draftsman, can be developed into most satisfactory maps, and most accurate detailed topography be reproduced from the photographs. This method is clearly shown by the series of pictures of our cañon survey. But these were not obtained without tribulation.

On New Year's morning we ran our three boats along a sand-bar, about thirty-five miles above the head of the Grand cañon, on the Colorado river, in northern Arizona, to let the photographer take a picture of the high red walls of Marble cañon. Our boats were tied up to the shore, while the photographer, with the cook to help him, went over a big rock before us, to reach a point which gave a view both up and down the river. The rest of us lounged in the boats, or in the bright sunshine on the sand-bar, and talked of home and the New Year's reunions which we should miss.

All was quiet around us, except for the

distant roar of the rapids we had just run, a mile or more up the river. Suddenly we were startled by a cry from the cook. In an instant we were at the foot of the cliff, and gathered, horrorstricken, around the photographer, who was stretched upon the sand, insensible

and bleeding. He had climbed up the cliff too boldly, to get a view that would take in the boats on the river; his foot slipped, and he fell headlong to the sandbar below. Well provided with medicines, bandages, and twenty years' experience in the far west, we set to work to prepare our hospital and care for our first patient. Soon we had his broken leg and smashed foot in splints and bandages. He rested easier, poor fellow, though we feared internal injuries, for he was still bleeding at the mouth.

It was now near noon, and there was time to stop and realize our situation. We were about the middle of Marble cañon, at the bottom of a chasm whose walls of sheer limestone stood two thousand feet high. There was no path from the bottom to the top. We had just enough provisions to carry us to Diamond creek. No one remained in the party who had even so much as focussed a camera. We saw before us the vital necessity of our railway survey-to carry back a series of photographs showing a panoramic view of the bottom of the great cañons through which the river ran, and there was not another professional photographer within a thousand miles. Besides this, we had to get a man with a broken leg out of the cañon to a place of

My life on the frontier had taught me to believe in Sam Patch's motto, "Some things can be done, as well as others;" and a decision was made at once We must get the wounded man out; we must go on with the survey, and a new photographer must be invented. It would not be safe to move that day, so we had a few hours in which to take our first picture. I had never adjusted a camera,

had never seen the inside of a roll-holder. How did the thing work, anyway? The photographer's book of record was at hand. It was full of columns, headed with all sorts of abbreviated notes and signs. They were so much Choctaw. All that was known,



"RUNNING A LEVEL."



HALF WAY UP.

should not be exposed so long in a bright sun as in a dark night. With that stock of knowledge and information the work began. The camera—a 61/2 x 81/2 Scovil & Adams instrument, with roll-holder -was focussed, and adjusted, and turned, and twisted; and every moment I became more excited and worried. At last, the roll-holder was put in place, the instrument carefully covered up with the focussing cloth, and the slide drawn; but as I attempted to take off the cap, I hesitated, dashed my hat upon the ground, and tore my hair, in desperation at the complicated state of affairs. While thus engaged, the cook picked up a kodak and took a snap-shot at me, and preserved for my future contemplation the absurd picture I was making.

This was the first of January, and it was not until March that we knew how our first picture turned out. meantime I had made over twelve hun-Peach Springs a telegram went to W. H. we had gained the top. Two of the men

and all that could be found out from Jackson, of Denver, to whom two batches anyone in the party, was that the film of rolls had been sent for development, and it was a happy moment when the answer came, "Negatives all right." It may be stated here that out of some sixteen hundred negatives taken to the end of our journey, full ninety per cent. were clear, well-timed pictures. This was not skill. It was accident, but that kind of accident which owes its birth to that troublesome matron so often found wandering in the wilds of the west, and commonly called necessity.

The next morning our patient was better. We loaded one of the boats so as to make him a level bed, and preparing a stretcher of two oars and a piece of canvas, put him on board and floated down the river a couple of miles to a side cañon that led out to the Lee's Ferry road.

After another night's rest the question that confronted us was not how to take photographs, but how to get rid of our wounded photographer.

At daybreak three of us started up the dred exposures. As soon as we reached side cañon to find a way out. By noon

went back to camp, while I walked thir- the wagon around the heads of the side get a wagon. Before the Mormon's happy about the size and shape of a No. 4 Dallmeyer lens.

But all troubles come to an end some-

ty-five miles to a Mormon settlement to cañons on the plain west of Lee's Ferry, but could not reach the sick man that day home was attained I several times wished as we had hoped. It was late, and we all photographs and photographers at the camped for the night on the open prairie bottom of the deep sea, or the Colorado -the old Mormon, his little son and I. A river, for as I sat down by the roadside at snow storm was driving from over the II: 55 P. M., still a mile away from rest, mountains. Our supper was cooked by a and pulled off my shoe, there shone out sedge-bush fire-the bacon, the coffee, and in the moonlight a blister on my heel the bread; but before it was eaten my friend knelt upon the ground, and turning his face up to heaven, while the snowflakes fell upon his white beard, offered It was not long after midnight up a fervent prayer for blessing upon our-

selves and upon those at home, for care for the wounded man, and strength for ourselves and the horses till we could reach him and take him to a place of safety.

I would that all of my Christian friends had the spirit of kindness and charity that it has been my good fortune to find among the Mormons in northern Arizona and southern Utah. This man was generous to a fault, -sincerely honest, and honestly sincere. What more can a man be?

It was noon on Sunday when we reached

when my Mormon friend spread a good the head of the gorge, to which the men bed upon the floor, and gave me posses- of the expedition had carried our wounded sion of the outside kitchen. Before I lay photographer. Eight of the strongest of down to rest I took a view of my sur- the party had started with him early Satroundings. By a slight adjustment of a urday morning from camp at the bottom cupboard door my eye was focussed on a of the cañon, and reached the top at 3:30 two-quart pan of sweet milk and another P.M. Well wrapped in blankets and half full of cold rice pudding. It did not strapped on the stretcher he was insensitake me many minutes to develop a neg- ble to all danger, as he was carried four ative, or at least a minus quantity in miles up the side gorge to a vertical height of one thousand seven hundred a clear conscience within and a half dozen feet. He hung in mid-air by ropes from Navajoe blankets without, I slept the sleep above, while the men slid the stretcher of a latter-day saint, except for the throb- along the sloping cliff, where one slip would have dashed the sick and well to How different were my surroundings eternity in the bottom of the cañon. The the next night! The picture is photo- last half mile carried us up a loose rock graphed upon my memory if nowhere slide at an angle of forty-nine degrees, else. We had travelled many miles with and dragged us through a hole under a



RESCUE WORK.

those two pans. With a full stomach and bing of the Dallmeyer on my left heel.



LOOKING AHEAD.

boulder too high to climb over. The supper, blankets or breakfast, for they had expected to meet the wagon and return to camp the same night.

Late Sunday afternoon we left our lost photographer, Mr. F. A. Nims, to the kind care of Mr. W. M. Johnson, of Lee's nursing he was soon in condition to It was deemed advisable to take a little

make the journey. We now returned to the new work of photographing the great cañons. work was inspiring. To set up one's camera in a hundred places where no camera had ever been before, to look upon scenes never witnessed for ages except by one party of men, is a pleasure not often to be had even on the frontier.

The object of our photographic work whole party spent the night at the head was, however, to acquire information for of the gulch in a snow storm without the railway survey, and not to picture the beauties of the scenery through which we were passing. The work of such a survey coupled with the dangers of the journey was trying in the extreme. The excitement of the wild dash through the rapids had its reaction, and by the end of Ferry, and under Mrs. Johnson's good each week the men were well tired out.

rest and recreation, and vary the method of our procedure from travelling down hill by water to travel up hill by land, and at the same time, if possible, to secure some pictures of the mighty chasm from above.

Early in the month of February we camped at the mouth of a stream beautifully clear, in the Grand cañon about forty



AN OUT-POST OF CIVILIZATION



A HITCH IN THE PROCEEDINGS.

miles below the Colorado Chiquito, and not far above Point Sublime. After a Sunday of rest we were ready to see something of the upper world. We had been months at the bottom of the great gorge, with the towering flaming walls above, and although among flowers and green grass in the valley, had looked for weeks upon the huge banks of drifted snow that fell over the edge of the rim rock, and down on the slopes, from the plateau on either side of the cañon. We wished to reach, if possible, the level of the snow, and looking upon the chasm from above. photograph some of its changing scenes.

The point where we ascended was near the spot chosen by Moran for the subject of his great painting of the Grand cañon that hangs in the capitol at Washington.

I have often stood before that painting in the senate gallery, and studied it, to see if it were possible to place upon canvas the grandeur, the beauty, the fantastic forms, and the startling changes of color that make this chasm the sublimest thing on earth.

Mr. Moran's painting, while grand in its outline, and beautiful in its detail and coloring, is yet to me a disappointment and sorrow. It is a perfect representation of the scene, caught as it were by an instantaneous plate, and colored by a master's brush. But herein lies the disappointment; it is quiet, it is still. The Grand cañon is never still, is never quiet. over the precipice and carefully calculate It is a living, moving thing, ever chang- how long it would take to reach the boting in form and color, pinnacles and towers tom. The wild flowers are blooming all

suddenly springing into being out of unseen depths. From dark shades of brown and black, scarlet flames suddenly flash out and then die away into stretches of orange and purple. How can such a shifting, animated glory be held still upon a canvas? Much less, how can such scenes of life and color be caught by the simple black and white of a silver print? But I am anticipating. We will climb the great north wall, and look upon this wonder for ourselves. My first assistant engineer, John Hislop, and Elmer Kane volunteer to

go with me. Kane straps the camera and tripod upon his back. We are supplied with biscuits, coffee and bacon, but carry no water, since we hope to reach the snow before night.

It is but a simple matter to ascend the granite slopes of the inner gorge, and to reach the top of the overlying stratum of sandstone, and from there to walk up the gentle declivities that reach to the base of the towering marble cliffs forming the inner rim of the upper chasm.

To scale these marble cliffs, which stand from one to two thousand feet in vertical walls, with scarce a bench or ledge wide enough for a mountain sheep, is a task of a different nature.

We carefully pick our way around the lower points of the marble, up through a crack some two hundred feet in height, and out upon a little ledge, perhaps three feet wide, that runs along the solid wall, till our progress seems cut off by a sharp buttress that projects out beyond the ledge. The buttress is V-shaped, the sharp point extending out over the bench. On the other side of it is the same little ledge. To reach it calls for strength of muscle and something like the nimbleness of a cat, for with toe of boot and ends of fingers fastened on little points of marble on one side, it is necessary to reach just such points on the other.

I hesitate for a moment; look down

We cannot help each other, and each must stand back while the other reaches the ledge beyond, or the dark valley below.

Not a word is spoken. Each one adjusts his trappings, that nothing may be out of place. Hislop first swings around and reaches the ledge in safety. I place my foot carefully on the edge of the wall, close to the buttress, and secure a good hold with my right hand. My left foot is thrown round, and my left hand creeps along till it catches a little finger of marble which seems left for the purpose.

Just as I start to make the leap I am caught by my coat on the edge of the marble and held fast in mid-air. Again I look down and calculate how long it would take to reach the bottom. With one strong effort I bend my back, loose the coat, and safely land on the farther edge.

Kane has longer arms and legs, and in a moment we are all around the buttress -having swung our bodies clean out in the air, -a thousand feet of sheer wall below us, and as much more above. It re-

over the slopes at the foot of the cliff. quires a cool head and steady nerve, for looking back we see it is impossible to return.

> We follow along the little ledge again, but it soon comes to an end,-stops suddenly at the bottom of a narrow crack in the wall that appears to stretch up to the very top of the cliff. So up we go through this crack with back well braced on one side, and catching toe and finger holds on the other.

> When up about half way we came against a boulder jammed in the crack, and it looks as if the journey was at an We sit down upon a projecting shelf to rest, and, as I look out over the abyss below, my thoughts for a moment turn homeward. There is, however, no time to be lost; the wiry, athletic Hislop is soon helped up over the boulder, and Kane crouches down upon the little shelf while I climb upon his shoulders, and, as he rises up, reach one hand to the man above, and am lifted bodily out into the air to the top of the boulder. Kane is soon disposed of in like manner, and after a couple of hours of hard climbing we



CONSULTATION BEFORE SHOOTING A RAPID.



EASY GOING.

wall-an island out in an ocean of thin mountain air. On the other side from which we approached it, a narrow wedge of marble connects it with the main cliff, from one foot to eighteen inches wide on top, and perhaps three hundred feet on either side to the first little bench below, and from that on down two thousand feet to the wild flowers on the slopes at the foot of the cliff.

The wind is blowing almost a gale; but like squirrels crossing on a swaying limb in a storm, we reach the top of the main cliff, and briskly ascend the slopes that fall from the bright red sandstones some four thousand feet above the river.

It is growing late, and we prepare for the night. A huge pile of dry cedar,

a crackling fire, some dry biscuits and toasted bacon are at hand, but not a drop of water have we tasted for thirty hours.

There is no trouble in arranging blankets that night. They are as light as the mountain air, which comes but a short distance from the banks of snow that cover the peaks and plateaus above us.

Long before the morning comes, our sleep is ended. sit by the edge of the marble precipice, with my back to the fire, and look out upon the darkness of the night. The whole great chasm is hushed in slumber. The mighty river, shut in by the blackness of the deep, seems resting from its everlasting toil.

The flash from our fire lights up in ghastly red the sandstone wall above us. While the many caverns, hundreds and thousands of feet below, lie like huge monsters, resting at the base of the cliffs, the ugly blackness of their fantastic forms but faintly shown by the dim light of the morning stars.

Soon, far out in the reach the top of the marble, not on the east, over among the towers and cloister main cliff, but on a point out from the buttes of Shiva's Temple, break the first faint rays of the coming day. Slowly the whole eastern sky is lit up with a strange and curious light. Not the gray of an Atlantic dawn, but a pale blue that seems to mellow the rays of the rising sun as they flash through the gray and yellow openings between the upper towers, turrets and cathedral spires of this land of wonder and amazement.

> Yonder, lower down through that side gorge, the sun has crept. Crept so noiselessly, and yet so suddenly, that one is startled at the wondrous change. The farther side of the cañon is all aglow. The scarlet sandstones and dark red marbles flash back the rosy light, which, mingling with the hazy blue of the atmosphere, casts over the whole landscape





LOOKS LIKE A STICKLER!

a glamour that is known nowhere else. We hasten to the top of the butte behind us to better see the drama of the opening day.

Far to the north, the great Kaibab plateau, covered with pure white snow, and fringed on its edge with the bright green of the stately pine, is sparkling in the morning sun, as if crowned with a diadem of myriads of clearest diamonds, decked with thousands of perfect emerald plumes. To the south and west the vision is bounded by the same high plateaus that lie north and south of the river.

The whole landscape is a network of caverns, gorges and ravines, and between them are towers, temples and buttes of every form, dimension and design,

As the sun rises over the surrounding platform, what a silent, curious change creeps over the whole scene! The clear light of the sun streams through every opening. The eastern walls of the templed buttes burn with almost living flame, and to the west are cast long shadows, so dark and so bold, that they seem as if into a pale purplish hue, which suddenly

portions of the night itself had been left by the way.

The whole lower cañon is still in solemn repose: but as the sun's light forces itself down the dark shadows steal away to hide themselves. The inner gorge wakes from its night of slumber, and as shadow chases shadow, and the bright sunlight leaps first here and then there, now around a buttressed point, then into a deep alcove, the whole scene is a moving panorama of light and shade and mingled tints of celestial beauty.

It is bewildering! One stands enchanted! The purplish blue of the atmosphere, though not of such a sleepy haze as in the summer time, gradually turns into a steely gray, as the sun rises higher and higher, and the sharp lines of the cliffs, that stood out so boldly at first, are blended into one indescribable mass of weird symmetry.

From beneath the snow-capped summits the gray and yellow of the highest ledges gradually sink, as the eye descends,



flashes out into the fiery scarlet of the their many-colored galleries to view. middle sandstones. talus at their base the brighter scarlet com- miles in length and thousands of feet in bines with the rich, deep red of the marble height, rear their majestic forms out of cliffs, and this, gradually melting away and mingling with the purples and darker browns of the lower sandstones, rests for a base upon the black granite of the inner ters, and recessed with alcoves and pangorge.

Across the chasm, to the southwest, where the sun now shines in all his glory,

Across the gray "Hundreds of these mighty structures, the abyss, displaying their richly-moulded plinths and friezes, thrusting out their gables, wing-walls, buttresses and pilasels." The architecture so grand, so bold, so wild, and yet grouped together with such symmetry, and over all the outer and the noble amphitheaters are opening up inner walls hung, with so much grace,

those parti-colored draperies in such varied tints, is yet in such blended harmony that none but He who first painted the lily and the rose could have been the artist

or the architect.

A morning on such a sculptured butte, in the presence of such awful grandeur, while slowly and noiselessly the darkness of night is changed into the beauty and sublimity of a perfect day, is like standing on some new Mount of Transfiguration, where language fails and description becomes impossible.



ALL THE COMFORTS OF HOME.

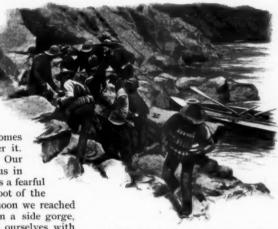
But one cannot always remain among such enchanting scenes, and however much the beauty and grandeur of the panorama may appeal to us, the stern necessity of the duty awaiting us below becomes more real the longer we stay. The problem

of the descent also becomes curious when we consider it. But it has to be faced. Our real work was awaiting us in the cañon below. It was a fearful task, the descent to the foot of the redwall limestone. By noon we reached the first pool of water in a side gorge, and rested and refreshed ourselves with

many cups of delicious coffee. More hard work, very perilous, which adds enormously to the fatigue, is before us. We cannot return by the route over which we came, but have to seek a new one. And it is not until late that evening we are again in our camp on the

river. The next day we resumed our journey to the gulf.

After months of hard labor our task was finally accomplished. A continuous



A BAD PLACE IN SIGHT. SERVING OUT THE LIFE-BELTS.

of Grand cañon is the result. The panorama of the route is a record of truth that cannot be gainsaid or denied. The mountain, or more strictly speaking the chasm, through the mountain, is brought to the prophet, and as he bows in reverence, the camera is enthroned beside the transit and the level, as an emblem of engineering-" That art of directseries of photographs showing the charing the great sources of power in nature, acteristics and the details of the whole for the use and convenience of man."



DUM VIVIMUS VIGILAMUS.

BY CHARLES HENRY WEBB.

Turn out more ale, turn up the light;
I will not go to bed tonight.
Of all the foes that man should dread,
The first and worse one is a bed.
Friends I have had, both old and young,
And ale we've drunk, and songs we've sung;
Enough you know when this is said:
That, one and all, they died in bed.
In bed they died, and I'll not go
Where all my friends have perished so.
Go you who fain would buried be—
But not tonight a bed for me.

For me tonight no bed prepare,
But set me out my oaken chair.
And bid no other guests beside
The ghosts that shall around me glide;
In curling smoke-wreaths I shall see
A fair and gentle company.
Though silent all, rare revellers they,
Who leave you not till break of day.
Go you who would not daylight see—
But not tonight a bed for me:
For I've been born and I've been wed—
A greater peril waits in bed.

And I'll not seek—whate'er befall—
Him who unbidden comes to all.
A grewsome guest, a lean-jawed wight—
God send he do not come tonight!
But if he do, to claim his own,
He shall not find me lying prone;
But blithely, bravely, sitting up,
And raising high the stirrup-cup.
Then, if you find a pipe unfilled,
An empty chair, the brown ale spilled;
Well may you know, though naught be said,
That I've been borne away to bed.



A TRAVELLER FROM ALTRURIA.

BY W. D. HOWELLS.

IX.

THE next time the members of our little group came together, the manufacturer began at once upon the banker:

"I should think our friend, the professor, here, would hardly like that notion of yours, that business, as business, has nothing to do with the education of a gentleman. If this is a business man's country, and if the professor has nothing in stock but the sort of education that business has no use for, I should suppose he would want to go into some other line."

The banker mutely referred the matter to the professor, who said, with that cold grin of his which I hated:

"Perhaps we shall wait for business to purge and live cleanly. Then it will have some use for the education of a gentleman."

"I see," said the banker, "that I have touched the quick in both of you, when I hadn't the least notion of doing so. But I shouldn't, really, like to prophesy which will adapt itself to the other: education or business. Let us hope there will be mutual concessions. There are some pessimists who say that business methods, especially on the large scale of the trusts and combinations, have grown worse, instead of better; but I doubt it. If it is so, it is because we are merely in what is called a 'transition state.' Hamlet must be cruel to be kind; the darkest hour comes before dawn; and so on. No doubt when business gets the whole affair of life into its hands, and runs the republic, as its enemies now accuse it of doing, the process of purging and living cleanly will begin. I have known lots of fellows who started in life rather scampishly; but when they felt secure of themselves, and believed that they could afford to be honest, they became so. There's no reason why the same thing shouldn't happen on a large scale. We must never forget that we are still a very novel ex-

periment, though we have matured so rapidly in some respects that we have come to regard ourselves as an accomplished fact. We are, really, less so than we were forty years ago, with the tremendous changes which have taken place since the war. Before that, we could take certain matters for granted. If a man got out of work, he turned his hand to something else; if a man failed in business, he started in again from some other direction; as a last resort, in both cases, he went west, preëmpted a quarter section of public land, and grew up with the country. Now, the country is grown up; the public land is gone; business is full on all sides, and the hand that turned itself to something else has lost its cunning. The struggle for life has changed from a free fight to an encounter of disciplined forces, and the free fighters that are left get ground to pieces between organized labor and organized capital. Decidedly, we are in a transition state, and if the higher education tried to adapt itself to business needs, there are chances that it might sacrifice itself without helping business. After all, how much education does business need? Were our great fortunes made by educated men, or men of university training? I don't know but these young fellows are right about that."

"Yes, that may all be," I put in. "But it seems to me that you give Mr. Homos, somehow, a wrong impression of our economic life by your generalizations. You are a Harvard man yourself."

"Yes, and I am not a rich man. A million or two, more or less; but what is that? I have suffered, at the start and all along, from the question as to what a man with the education of a gentleman ought to do in such and such a juncture. The fellows who have not that sort of education have not that sort of question, and they go in and win."

"So you admit, then," said the professor, "that the higher education elevates a business man's standard of morals?"

laugh.

"Well," I said, with the deference due even to a man who had only a million or two, more or less, "we must allow you to say such things. But if the case is so bad with the business men who have made the great fortunes—the business men who have never had the disadvantage of a university education—I wish you would explain to Mr. Homos why, in every public exigency, we instinctively appeal to the business sense of the community, as if it were the fountain of wisdom, probity and equity. Suppose there were some question of vital interest -I won't say financial, but political, or moral, or social-on which it was necessary to rouse public opinion; what would be the first thing to do? To call a meeting, over the signatures of the leading business men; because no other names appeal with such force to the public. You might get up a call signed by all the novelists, artists, ministers, lawyers and doctors in the state, and it would not have a tithe of the effect, with the people at large, that a call signed by a few leading merchants, bank presidents, railroad men and trust officers, would have. What is the reason? It seems strange that I should be asking you to defend yourself against yourself.'

all!" the banker replied, with his caressto answer your question to your entire satisfaction. I can only do my best-on

the installment plan."

He turned to the Altrurian, and then went on:

"As I said the other night, this is a business man's country. We are a purely commercial people; money is absolutely American ideal. If you like, you may call it the American fetish; I don't mind ness is our ideal, or our fetish, will account for the popular faith in business men, who form its priesthood, its hie-

"Undoubtedly. That is one of its chief isters, not to mention lawyers and docdrawbacks," said the banker, with a tors. They are supposed to have long heads; but it appears that ninety-five times out of a hundred they haven't. They are supposed to be very reliable; but it is almost invariably a business man, of some sort, who gets out to Canada while the state examiner is balancing his books, and it is usually the longest-headed business men who get plundered by him. No, it is simply because business is our national ideal, that the business man is honored above all other men among us. In the aristocratic countries they forward a public object under the patronage of the nobility and gentry; in a plutocratic country they get the business men to endorse it. I suppose that the average American citizen feels that they wouldn't endorse a thing unless it was safe; and the average American citizen likes to be safe—he is cautious. As a matter of fact, business men are always taking risks, and business is a game of chance, in a certain degree. Have I made myself intelligible?"

"Entirely so," said the Altrurian; and he seemed so thoroughly well satisfied, that he forbore asking any question far-

No one else spoke. The banker lighted a cigar, and when he began again he resumed at the point where he left off when I ventured to enter upon the defense of his class with him. I must say "Not at all, my dear fellow, not at that he had not convinced me at all. At that moment, I would rather have ing bonhomie. "Though I will con- trusted him, in any serious matter of fess, to begin with, that I do not expect practical concern, than all the novelists I ever heard of. But I thought I would leave the word to him, without further attempt to reinstate him in his self-esteem. In fact, he seemed to be getting along very well without it; or else he was feeling that mysterious control from the Altrurian which I had already suspected him of using. Voluntarily or involuntarto the fore; and business, which is the ily, the banker proceeded with his conmeans of getting the most money, is the tribution to the Altrurian's stock of knowledge concerning our civilization:

"I don't believe, however, that the calling it so myself. The fact that busi- higher education is any more of a failure, as a provision for a business career, than the lower education is for the life of labor. I suppose that the hypercritical rarchy. I don't know, myself, any other observer might say that in a wholly comreason for regarding business men as mercial civilization, like ours, the business solider than novelists, or artists, or min- man really needed nothing beyond the three R's, and the workingman needed no R at all. As a practical affair, there is a good deal to be said in favor of that view. The higher education is part of the social ideal which we have derived from the past, from Europe. It is part of the provision for the life of leisure, the life of the aristocrat, which nobody of our generation leads, except women. Our women really have some use for the education of a gentleman, but our men have none. How will that do, for a generalization?" the banker asked of me.

"Oh," I admitted, with a laugh, "it is a good deal like one of my own. I have always been struck with that phase of our

civilization."

"Well, then," the banker resumed, "take the lower education. This is part of the civic ideal which, I suppose, I may say we evolved from the depths of our inner consciousness of, what an American citizen ought to be. It includes instruction in all the R's, and in several other letters of the alphabet. It is given free, by the state, and no one can deny that it is thoroughly socialistic in conception and application."

"Distinctly so," said the professor.
"Now that the text-books are furnished by the state, we have only to go a step farther, and provide a good, hot lunch for the children every day, as they do in

Paris."

"Well," the banker returned, "I don't know that I should have much to say against that. It seems as reasonable as anything in the system of education which we force upon the working-classes. They know, perfectly well, whether we do or not, that the three R's will not make their children better mechanics or laborers, and that, if the fight for a mere living is to go on, from generation to generation, they will have no leisure to apply the little learning they get in the public schools, for their personal culture. In the meantime, we deprive the parents of their children's labor, in order that they may be better citizens for their schooling, as we imagine; I don't know whether they are or not. We offer them no sort of compensation for their time, and I think we ought to feel obliged to them for not wanting wages for their children while we are teaching them to be better citizens."

"You know," said the professor, "that has been suggested by some of their leaders."

"No, really? Well, that is too good!"
The banker threw back his head, and roared, and we all laughed with him. When we had sobered down again, he said: "I suppose that when a workingman makes all the use he can of his lower education, he becomes a business man, and then he doesn't need the higher. Professor, you seem to be left out in the cold, by our system, whichever way you take it."

"Oh," said the professor, "the law of supply and demand works both ways; it creates the demand, if the supply comes first; and if we keep on giving the sons of business men the education of a gentleman, we may yet make them feel the need of it. We shall evolve a new sort of

business man."

"The sort that can't make money, or wouldn't exactly like to, on some terms?" asked the banker. "Well, perhaps we shall work out our democratic salvation in that way. When you have educated your new business man to the point where he can't consent to get rich at the obvious cost of others, you've got him on the way back to work with his hands. He will sink into the ranks of labor, and give the fellow with the lower education a chance. I've no doubt he'll take it. I don't see but you're right, professor."

The lawyer had not spoken, as yet. Now he said: "Then, it is education, after all, that is to bridge the chasm between the classes and the masses, though it seems destined to go a long way round about it. There was a time, I believe, when we expected religion to do that."

"Well, it may still be doing it, for all I know," said the banker. "What do you say?" he asked, turning to the minister. "You ought to be able to give us some statistics on the subject, with that large congregation of yours. You preach to more people than any other pulpit in your city."

The minister answered, with modest pride: "I am not sure of that; but our society is certainly a very large one."

"Well, and how many of the lower classes are there in it—people who work for their living with their hands?"

The minister stirred uneasily in his chair, and at last he said, with evident classes was right; and I have had some of the very best people - socially and these things are easily done. financially-with me in the wish that there might be more brotherliness between the rich and poor among us. as yet ".

"Do you mean that there are no working-people in your congregation?"

"I cannot think of any," returned the minister, so miserably that the banker

forebore to press the point.

The lawyer broke the awkward pause which followed: "I have heard it asserted that there is no country in the world, where the separation of the classes is so absolute as in ours. In fact, I once heard a Russian revolutionist, who had lived in exile all over Europe, say that he had never seen, anywhere, such a want of kindness between rich and poor, as he had observed in America. I doubted whether he was right. But he believed that, if it ever came to the industrial revolution with us, the fight would be more uncompromising than any such fight that the world had ever seen. There was no respect from low to high, he said, and no consideration from high to low, as there were in countries with traditions and old associations."

"Well," said the banker, "there may be something in that. Certainly, so far as the two forces have come into conflict here, there has been no disposition, on either side, to 'make war with the water of roses.' It's astonishing, in fact, to see how ruthless the fellows who have just got up are towards the fellows who are still down. And the best of us have been up only a generation or two-and the fellows who are still down know it."

"And what do you think would be the outcome of such a conflict?" I asked, with my soul divided between fear of it, and the perception of its excellence as material. My fancy vividly sketched the outline of a story which should forecast the struggle and its event, somewhat on the plan of the Battle of Dorking.

"We should beat," said the banker, breaking his cigar-ash off with his little

unhappiness: "They-I suppose-they cian leader, in my Fall of the Republic. have their own churches. I have never Of course, I disguised him somewhat. thought that such a separation of the and travestied his worldly bonhomic with the bluff sang-froid of the soldier:

> "What makes you think we should beat?" asked the manufacturer, not anx-But iously, but with a certain curiosity.

"Well, all the good jingo reasons: we He stopped, and the banker pursued: have got the materials for beating. Those fellows throw away their strength whenever they begin to fight, and they've been so badly generaled, up to the present time, that they have wanted to fight at the outset of every quarrel. They have been beaten in every quarrel, but still they always want to begin by fighting. That is all right. When they have learned enough to begin by voting, then we shall have to look out. But if they keep on fighting, and always putting themselves in the wrong and getting the worst of it, perhaps we can fix the voting so that we needn't be any more afraid of that than we are of the fighting. It's astonishing how short-sighted and illogical they are. They have no conception of any cure for their grievances, except more wages and fewer hours."

> "But," I asked, "do you really think they have any just grievances?"

> "Of course not, as a business man," said the banker. "If I were a workingman, I should probably think differently. But we will suppose, for the sake of argument, that their day is too long and their pay is too short. How do they go about it to better themselves? They strike. Well, a strike is a fight, and in a fight, now-a-days, it is always skill and money that win. The workingmen can't stop till they have put themselves outside of the public sympathy which the newspapers say is so potent in their behalf; I never saw that it did them the least good. They begin by boycotting, and breaking the heads of the men who want to work. They destroy property, and they interfere with businessthe two absolutely sacred things in the American religion. Then we call out the militia, and shoot a few of them, and their leaders declare the strike off. It is perfectly simple."

"But will it be quite as simple," I finger; and I instantly cast him, with his asked, reluctant in behalf of my projectironic calm, for the part of a great patri- ed romance, to have the matter so soon disposed of, "will it be quite as simple if say, but the spectacle of their stupidity their leaders should ever persuade the workingmen to leave the militia, as they threaten to do, from time to time?"

" No, not quite as simple," the banker admitted. "Still, the fight would be always comparatively simple. In the first place, I doubt—though I won't be certain about it-whether there are a great many workingmen in the militia now. I rather fancy it is made up, for the most part, of clerks and small tradesmen, and bookkeepers, and such employés of business as have time and money for it. I may be mistaken."

No one seemed able to say whether he was mistaken or not; and, after waiting

a moment, he proceeded:

" I feel pretty sure that is so in the city companies and regiments, at any rate, and that if every workingman left them, it would not seriously impair their effectiveness. But when the workingmen have left the militia, what have they done? They have eliminated the only thing that disqualifies it for prompt and unsparing use against strikers. As long as they are in it, we might have our misgivings, but if they were once out of it, we should have none. And what would they gain? They would not be allowed to arm and organize as an inimical force. That was settled once for all, in Chicago, in the case of the International Groups. A few squads of policemen would break them up. Oh, no! Their only hope for mischief is to remain in the militia and weaken it by their disaffection in the event of a fight. But they have always managed so badly that I should not be surprised if they threw away this advantage too. Why,' the banker exclaimed, with his goodhumored laugh, "how preposterous they are, when you come to look at it! They are in the majority, the immense majority, if you count the farmers, and they prefer to behave as if they were the hopethey strike, and try to fight it. Why if it is altogether a woman's logic. Parole don't they vote it? They could make it femmine, fatti maschi, and the logic of the law in six months, by such over-events isn't altogether words; it's full of whelming numbers that no one would hard knocks, too. But I'm no prophet.

and helpless wilfulness is so lamentable that I could almost pity them. If they chose, it would take only a few years to transform our government into the likeness of anything they wanted. But they would rather not have what they want, apparently, if they can only keep themselves from getting it, and they have to work hard to do that !"

"I suppose," I said, "that they are misled by the un-American principles and methods of the socialists among them."

"Why, no," returned the banker, "I shouldn't say that. As far as I understand it, the socialists are the only fellows among them who propose to vote their ideas into laws, and nothing can be more American than that. I don't believe the socialists stir up the strikes, at least among our workingmen, although the newspapers convict them of it, generally without trying them. The socialists seem to accept the strikes as the inevitable outcome of the situation, and they make use of them as proofs of the industrial discontent. But, luckily for the status, our labor leaders are not socialists, for your socialist, whatever you may say against him, has thought himself into a socialist. He generally knows that until the workingmen stop fighting, and get down to voting-until they consent to be the majority-there is no hope for them. I am not talking of anarchists, mind you, but of socialists, whose philosophy is more law, not less, and who look forward to an order that can't be disturbed."

"And what," the minister faintly said, "do you think will be the outcome of it all?

"We had that question the other night, didn't we? Our legal friend, here, seemed to feel that we might rub along indefinitely as we are doing, or work out an Altruria of our own; or go back to the patriarchal stage, and own our working men. less minority. They say they want an He seemed not to have so much faith in eight-hour law, and every now and then the logic of events as I have. I doubt dare to evade or defy it. They can make I can't forecast the future; I prefer to any law they want, but they prefer to take it as it comes. There's a little tract break such laws as we have. That 'alien- of William Morris's though-I forget just ates public sympathy,' the newspapers what he calls it—that is full of curious

He thinks that if we keep the road we are reason why we should not found a new now going, the last state of labor will be Altruria here on the lines I've drawn? like its first, and it will be owned."

"Oh, I don't believe that will ever happen in America," I protested, from a chauvanism deeper even than my awe of

a financier.

"Why not?" asked the banker. "Practically, it is owned already in a vastly greater measure than we recognize. And where would the great harm be? The new slavery would not be like the old. There needn't be irresponsible whipping and separation of families, and private buying and selling. The proletariat would probably be owned by the state, as it was at one time in Greece; or by large corporations, which would be much more in keeping with the genius of our free institutions; and an enlightened public opinion would cast safeguards about it in the form of law to guard it from abuse. But it would be strictly policed, localized, and controlled. There would probably be less suffering than there is now, when a man may be cowed into submission to any terms through the suffering of his family; when he may be starved out and turned out if he is unruly. You may be sure that nothing of that kind would happen in the new slavery. We have not had nineteen hundred years of Christianity for nothing."

The banker paused, and as the silence continued he broke it with a laugh, which was a prodigious relief, to my feelings, and I suppose to the feelings of all. I perceived that he had been joking, and I was Mrs. Makely has a plan." confirmed in this when he turned to the Altrurian and laid his hand upon his chair near her own, toward me. "Sit shoulder. "You see," he said, "I'm a down and listen!"

and interesting speculation on this point. kind of Altrurian myself. What is the Have you never had philosophers-well, call them philanthropists; I don't mindof my way of thinking among you?"

"Oh, yes," said the Altrurian. "At one time, just before we emerged from the competitive conditions, there was much serious question whether capital should not own labor, instead of labor owning capital. That was several hundred years ago."

"I am proud to find myself such an advanced thinker," said the banker. "And how came you to decide that labor

should own capital?'

"We voted it," answered the Altrurian. "Well," said the banker, "our fellows are still fighting it, and getting beaten."

I found him later in the evening, talking with Mrs. Makely. "My dear sir," I said, "I liked your frankness with my Altrurian friend immensely; and it may be well to put the worst foot foremost; but what is the advantage of not leaving

us a leg to stand upon?'

He was not in the least offended at my boldness, as I feared he might be, but he said with that jolly laugh of his, "Capital! Well, perhaps I have worked my frankness a little to hard; I suppose there is such a thing. But don't you see that it leaves me in the best possible position to carry the war into Altruria, when we get him to open up about his native land?'

"Ah! If you can get him to do it." "Well, we were just talking about that.

"Yes," said the lady, turning an empty





OMEGA:

THE LAST DAYS OF THE WORLD.

BY CAMILLE FLAMMARION.

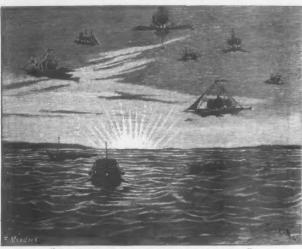
SECOND PART.

HE events which we have just described, and the discussions to which they gave rise, took place in the twenty-fifth century of the Christian era. Humanity was not destroyed by the shock of the comet, although this was the most memorable event in its entire history, and one never forgotten, notwithstanding the many transformations which the continued to rotate and the sun to shine; little children had become old men, and 875 to 1000 millions; that of the Amer-

their places had been filled by others in the eternal succession of generations. Centuries and ages had succeeded each other, and humanity, slowly advancing in knowledge and happiness, through a thousand transitory interruptions, had reached its apogee and accomplished its destiny.

But how vast this series of transformations, physical and mental!

The population of Europe, from the year race has since undergone. The earth had 1900 to the year 3000, had increased from 375 to 700 millions; that of Asia, from



VOYAGES WERE MADE PREFERABLY BY AIR-SHIPS

Africa, from 75 to 200 millions; that of Australia, from 5 to 60 millions; which, for the total population of the globe, gives ations.

Language had become transformed. guage had spread over the entire world. From the twenty-fifth to the thirtieth slavery had been reëstablished. centuries, the spoken language of Europe was based upon a mixture of English, of French, and of Greek derivatives. Every effort to create artificially a new universal language had failed.

Long before the twenty-fifth century, war had disappeared, and it became difficult to conceive how a race which pretended to knowledge and reason could have endured so long the yoke of clever rascals who lived at its expense. In vain had later sovereigns proclaimed, in highof the struggle for existence; that it con-

icas, from 120 to 1500 millions; that of It was, at last, observed that, with the exception of certain ants, no animal species had set an example of such boundless folly as the human race: that the an increase of 2010 millions. And this struggle for life did not consist in slaughincrease had continued, with some fluctu- tering one another, but in the conquest of nature; that all the resources of humanity were absolutely wasted in the The never-ceasing progress of science and bottomless gulf of standing armies; and industry had created a large number of that the mere obligation of military sernew words, generally of Greek deriva- vice, as formulated by law, was an ention. At the same time, the English lan- croachment upon human liberty, so serious that, under the guise of honor,

Men perceived that the military system meant the maintenance of an army of parasites and idlers, yielding a passive obedience to the orders of diplomats, who were simply speculating upon human credulity. In early times, war had been carried on between villages, for the advantage and glory of chieftains, and this kind of petty warfare still prevailed in the nineteenth century, between the villages of central Africa, where even young men and women, persuaded of their sounding words, that war was a divine slavery, were seen, at certain times, to institution; that it was the natural result present themselves voluntarily at the places where they were to be sacrificed. stituted the noblest of professions; that Reason having, at last, begun to prevail, patriotism was the chief of virtues. In men had then formed themselves into provain were battle-fields called fields of vinces, and a warfare between provinces honor; in vain were the statues of the arose-Athens contending with Sparta, victors erected in the most populous cities. Rome with Carthage, Paris with Dijon;

wars of the Duke of Burgundy against the king of France, of the Normans against the Parisians, of the Belgians against the Flemish, of the Saxons against the Bavarians, of the Venetians against the Florentines, etc., etc. Later, nations had been formed, thus doing away with provincial flags and boundaries; but men continued to teach their children to hate their neighbors, and citizens were accoutred for the sole purpose of mutual extermination. Interminable wars arose, wars ceaselessly renewed, between France, England, Germany, Italy, Spain, Austria, Russia, Turkey, etc. The development of weapons of destruction had kept pace with the progress of chemistry, mechanics, aëronautics, and most of the other sciences, and theorists were to be found, especially among statesmen, who declared that war was the necessary condition of progress, forgetting that it was only the sorry heritage of barbarism, and that the majority of those who have contributed to the progress of science and industry, electricity, physics, mechanics, etc., have all been the most pacific of men. Statistics had proved that war regularly claimed forty million victims per century, 1100 per day, without truce or intermission, and had made 1200 million corpses in 3000 years. It was not surprising that nations had been exhausted and ruined. since in the nineteenth century alone they had expended, to this end, the sum of 700,000 million francs. These divisions, appealing to patriotic sentiments skillfully kept alive by politicians who lived upon them, long prevented Europe from imitating the example of America in the suppression of its armies, which consumed all its vital forces and wasted yearly more than 10,000 million francs of the resources acquired at such sacrifice by the laborer, and from forming a United States of Europe. But though man could not make up his mind to do away with the tinsel of national vanity, woman came to his

Under the inspiration of a woman of spirit, a league was formed of the mothers of Europe, for the purpose of educating their children, especially their daughters, to a horror of the barbarities of war. The folly of men, the frivolity of the pretexts which arrayed nations against each other,

and history had celebrated the glorious the knavery of statesmen who moved heaven and earth to excite patriotism and blind the eyes of peoples; the absolute uselessness of the wars of the past and of that European equilibrium which was always disturbed and never established; the ruin of nations; fields of battle strewn with the dead and the mangled, who, an hour before, lived joyously in the bountiful sun of nature; widows and orphans -in short, all the misery of war was forced upon the mind, by conversation, recital and reading. In a single generation, this rational education had freed the young from this remnant of animalism, and inculcated a sentiment of profound horror for all which recalled the barbarism of other days. Still, governments refused to disarm, and the war budget was voted from year to year. It was then that the young girls resolved never to marry a man who had borne arms; and they kept their vow.

The early years of this league were trying ones, even for the young girls; for the choice of more than one fell upon some fine-looking officer, and, but for the universal reprobation, her heart might have yielded. There were, it is true, some desertions; but, as those who formed these marriages were, from the outset, despised and ostracized by society, they were not numerous. Public opinion was formed, and it was impossible to stem the tide.

For about five years there was scarcely a single marriage or union. Every citizen was a soldier, in France, in Germany, in Italy, in Spain, in every nation of Europe -all ready for a confederation of states, but ever recoiling before questions represented by the national flag. The women held their ground; they felt that truth was on their side, that their firmness would deliver humanity from the slavery which oppressed it, and that they could not fail of victory. To the passionate objurgations of certain men, they replied: "No! we will have nothing more to do with fools;" and, if this state of affairs continued, they had decided to keep their vow, or to emigrate to America, where, centuries before, the military system had disappeared.

The most eloquent appeals for disarmament were made at every session to the committee of administrators of the state,



GIRLS REFUSING TO MARRY.

more impregnable, the deputies of every country, as if animated by a common motive, eloquently advocated the cause of women, and that very week disarmament was voted in Germany, France, Italy, Austria and Spain.

It was spring-time. There was no disorder. Innumerable marriages followed. Russia and England had held aloof from the movement, the suffrage of women in these countries not having been unanimous. But as all the states of Europe were formed into a republic the ensuing year, uniting in a single confederated state, on the invitation of the government of the ternal order, the security of life and prop-United States of Europe, these two great erty, the support of schools, and the ennations also decreed a gradual disarm- couragement of new researches. But ament. Long before this time, India had individual initiative was far more effectbeen lost to England, and the latter had ive than the old-time official centraliza-

formerly called deputies or senators. Fi- become a republic. As for Russia, the nally, after a lapse of five years, face to monarchical form of government still face with this wall of feminine opposition, existed. It was then the middle of the which, day by day, grew stronger and twenty-fourth century, and from that epoch the narrow sentiment of patriotism was replaced by the general one of humanity.

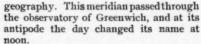
> Delivered from the ball and chain of military slavery, Europe had immediately gotten rid of the bureaucracy which had also exhausted nations, condemned to perish, as it were, by plethora. But for this a radical revolution was necessary. From that time on, Europe had advanced as by magic in a marvellous progresssocial, scientific, artistic and industrial. Taxation, diminished by nine-tenths, served only for the maintenance of in

tion which for so many years had stifled individual effort, and bureaucracy was dead and buried.

At last one breathed freely, one lived. In order to pay 700,000 millions every century to citizens withdrawn from all productive work, and to maintain the bureaucracy, governments had been obliged to increase taxation to a fearful degree. The result was that everything was taxed: the air one breathes, the water one drinks, the light and heat of the sun, bread, wine and every article of food, clothing, houses, the streets of cities, the country roads, animals, horses, oxen, dogs, cats, hens, rabbits, birds in cages, plants, flowers, musical instruments, pianos, organs, violins, zithers, flutes, trumpets, trades and professions, the married and the unmarried, children, furniture-everything, absolutely everything; and this taxation had grown until it equalled the net product of all human labor, with the single exception of the "daily bread." Then, all work had ceased. It seemed thenceforth impossible to live. It was this state of affairs which led to the great social revolution of the international socialists, of which mention was made at the beginning of this book, and to others which followed it. But these upheavals had not definitely liberated Europe from the barbarism of

> by-gone days, and it was to the young women's league that humanity owed its deliverance.

The unification of nations, of ideas, of languages, had brought about also that of weights and measures. No nation had resisted the universal adoption of the metric system, based upon the dimensions of the planet itself. A single kind of money was in circula-



Nations which we call modern had vanished like those of the past. France had disappeared in the twenty-eighth century, after an existence of about two thousand years. Germany had disappeared in the thirty-second; Italy in the twenty-ninth: England had spread over the surface of the ocean.

Meteorology had attained the precision of astronomy, and about the thirtieth century the weather could be predicted without error.

The forests, sacrificed to agriculture and the manufacture of paper, had entirely disappeared.

The legal rate of interest had fallen to one-half of one per cent.

Electricity had taken the place of steam. Railroads and pneumatic tubes were still in use, but only for the transportation of freight. Voyages were made preferably by dirigible balloons, aëroplanes and airships, especially in the daytime.

This very fact of aërial navigation would have done away with frontiers if the progress of reason had not already abolished them. Constant intercourse between all parts of the globe had brought about internationalism, and the absolutely free exchange of goods and ideas. Customhouses had been suppressed.

The telephonoscope disseminated immediately the most important and interesting news. A comedy played at Chicago or Paris could be heard and seen in every city of the world.

Astronomy had attained its end: the knowledge of the life of other worlds and the establishment of communication with them. All philosophy, all religion, was founded upon the progress of astronomy.

Marvellous instruments in optics and physics had been invented. A new substance took the place of glass, and had yielded the most unexpected results to science. New natural forces had been conquered.

of the planet itself. A single
kind of money
was in circulation. One initial
meridian ruled in



sumptuous repasts no longer consisted of our era, a single race existed, rather of the smoking remains of slaughtered animals-beef, veal, lamb, pork, chicken, fish and birds,—but were served amid the harmonies of music in rooms adorned with plants ever green and flowers ever perfumes. Freed from the vulgar necesrepair of organic tissue in exquisite

drinks, fruits, cakes and pills. About the thirtieth century, especially, the nervous system began to grow more delicate, and developed in unexpected ways. Woman was still somewhat more could act in the lower cells), and her head had remained smaller, her forehead narrower; but the former was so elegantly placed upon a neck of such supple grace, and rose so nobly from the shoulders and the bust, that it compelled more than ever most change, having become more nubody had diminished in size. Giants

were no longer to be seen. insensibly the human form; the development of the intellectual faculties and of the brain, the decrease in manual labor and bodily exercise, the transformation of food, and the marriage system. The first had increased the size of the cranium as the animal population of the globe had compared with the rest of the body; the completely changed. The wild species, second had decreased the strength of the lions, tigers, hyenas, panthers, elephants, limbs; the third had diminished the size giraffes, kangaroos, as also whales and of the abdomen and made the teeth finer seals, had become extinct.

succeeded in producing sugar, albumen, and smaller; the tendency of the fourth the amides and fats, from the air, water had been rather to perpetuate the classic and vegetables, and, by skillfully varying forms of human beauty: masculine bearthe proportions, in forming the most ad- ing, the nobility of an uplifted countenvantageous combinations of carbon, hy- ance, and the graceful outlines of womandrogen, oxygen and nitrogen, so that hood. About the two hundredth century small in stature, light colored, in which anthropologists might, perhaps, have discovered some traces of Anglo-Saxon and Chinese descent.

Humanity had tended towards unity, in bloom, in an atmosphere laden with one race, one language, one general government, one religion. There were no sity of masticating meats, the mouth ab- more state religions; only the voice of sorbed the principles necessary for the an enlightened conscience, and in this unity former anthropological differences

had disappeared.

In former ages poets had prophesied that in the marvellous progress of things man would finally acquire wings, and fly through the air by his muscular force narrow-minded than man, and her men- alone; but they had not studied the origin tal operations differed from his as before, of anthropomorphic structure and had (her exquisite sensibility responding to forgotten that for a man to have at the sentimental considerations before reason same time arms and wings, he must belong to a zoölogical order of sextupeds which does not exist on our planet; for man belongs to the quadrupeds, a type which has been gradually modified. But though he had not acquired new natural organs, he had acquired artificial ones, to the admiration of man, not only as a say nothing of his psychical transforwhole, but also by the penetrating sweet- mation. He had conquered the region of ness and beauty of the mouth and the the air and could soar in the sky by light light curls of its luxuriant hair. Al- apparatus, whose motor power was electhough comparatively smaller than that tricity, and the atmosphere had become of man, the head of woman had never- his domain as it had been that of the theless increased in size with the exercise birds. It is very probable that if in the of the intellectual faculties; but the cere- course of ages a winged race could have bral circonvolutions had experienced the acquired, by the development of its faculties of observation, a brain analogous merous and more pronounced in both to that of even the most primitive man, it sexes. In short, the head had grown, the would have soon dominated the human species and replaced it by a new one,-a winged race of the same zoölogical type Four permanent causes had modified as the quadrupeds and bipeds. But the force of gravity is an obstacle to any such organic development of the winged species, and humanity, grown more perfect, had remained master of the world.

At the same time, in the lapse of ages,

II.

About the one hundredth century of the Christian era all resemblance between the human race and monkeys had disappeared.

The nervous sensibility of man had become intensified to a marvellous degree. The sense of sight, of hearing, of smell, of touch, and of taste, had gradually acquired a delicacy far exceeding that of their earlier and grosser manifestations. Through the study of the electrical properties of living organisms, a seventh sense, the electric sense, was created outright, so to speak; and every one possessed the power of attractmatter, to a degree depending upon the temperament of the individual. But by far the most important of all the senses, the one which played the greatest rôle in life, Subsequently, marriages were reg-

men's relations to each other, was the eighth, the psychic sense, by which communication at a distance became possible.

A glimpse has been had of two other senses also, but their development had

been arrested from the very outset. The first had to do with the visibility of the ultra violet rays, so sensitive to chemical tests, but wholly invisible to the human eye. Experiments made in this direction had resulted in the acquisition of no new power and had considerably impaired those previously enjoyed. second was the sense of orientation; but every effort made to develop it had proved a failure, notwithstanding the attempt to make use of the results of researches in terrestrial magnetism.

For some time past, the offspring of the once titled and aristocratic classes of society had formed a sickly and feeble ing and repelling both living and inert race, and the governing body was recruited from among the more virile members of the lower class, who, however, were in their turn soon enervated by a worldly

> ulated on established principles of selection and heredity.

The development of man's intellectual faculties, and the cultivation of psychical science, had wrought great changes in humanity. Latent faculties of the soul had been discovered, faculties which had remained dormant for perhaps a million years, during the earlier reign of the grosser instincts, and, in proportion as food based upon chemical principles was substituted for the coarse nourishment which had prevailed for so long a time, these faculties came to light and underwent a brilliant development. As a mental operation, thought became a different thing from what it now is. Mind acted readily upon mind at a distance, by virtue of a transcendental magnetism, of which even children knew how to avail themselves.

The first interastral communication was with the planet Mars, and the second with Venus, the latter being



"EVEN CHILDREN COULD AVAIL THEMSELVES OF IT."

riages had resulted in a really new race, resembling ours in organic form, but possessing wholly different intellectual powers. For the once barbarous and often blind methods of medicine, and even of surgery, had been substituted those derived from a knowledge of hypnotic, magnetic and psychic forces, and tele-

pathy had become a great and fruitful heat of the earth's interior. science.

also had been transformed. had produced mighty but ephemeral rebeen for a long time a seaport, and elecport of London was made in a few hours, and many travellers availed themselves of this route, in preference to the regular completed, and the long detour by way air, united the Iberian republic, formerly ria, formerly Morocco. Paris and Chicago

maintained to the end of the world; the tinuing its growth toward the west from former was interrupted by the death of century to century, now extended from the inhabitants of Mars; whereas inter- the confluence of the Marne beyond St. course with Jupiter was only just begin- Germain. All great cities had grown at ning as the human race neared its own the expense of the country. Agricultural end. A rigid application of the princi- products were manufactured by electricples of selection in the formation of mar- ity; hydrogen was extracted from sea-

water; the energy of waterfalls and tides was utilized for lighting purposes at a distance; the solar rays, stored in summer, were distributed in winter, and the seasons had almost disappeared especially since the introduction of heat wells, which brought to the surface of the soil the seemingly inexhaustible



THE CHINESE CAPITOL.

But what is the twenty-fifth century in Simultaneously with man the planet comparison with the thirtieth, the for-Industry tieth, the hundredth!

Everyone knows the legend of the Arab sults. In the twenty-fifth century, whose of Kazwani, as related by a traveller of events we have just described, Paris had the thirteenth century, who at that time, moreover, had no idea of the duration of tric ships from the Atlantic, and from the the epochs of nature. "Passing one Pacific by the Isthmus of Panama, ar- day," he said, "by a very ancient and rived at the quays of the abbey of Saint very populous city, I asked one of its in-Denis, beyond which the great capital ex- habitants how long a time it had been tended far to the north. The passage founded. 'Truly,' he replied, 'it is a powfrom the abbey of Saint Denis to the erful city, but we do not know how long it has existed, and our ancestors are as ignorant upon this subject as we.""

"Five centuries later I passed by the air route, the tunnel, and the viaduct over same spot, and could perceive no trace of the channel. Outside of Paris the same the city. I asked a peasant who was activity reigned; for, in the twenty-fifth gathering herbs on its former site, how century also, the canal uniting the Med- long it had been destroyed. 'Of a truth,' iterranean with the Atlantic had been he replied, 'that is a strange question. This field has always been what it now of the Straits of Gibraltar had been aban- is.' But was there not formerly a splendoned; and on the other hand a metallic did city here?' I asked. 'Never,' he antube, for carriages driven by compressed swered, 'at least so far as we can judge from what we have seen, and our fathers Spain and Portugal, with Western Alge- have never told us of any such thing.'

"On my return five hundred years then had nine million inhabitants, Lon- later to the same place I found it occudon ten; New York, twelve. Paris, con- pied by the sea; on the shore stood a group of fishermen, of whom I asked at what period the land had been covered by the ocean. 'Is that question worthy of a man like you?' they replied; 'this spot has always been such as you see it today.'

"At the end of five hundred years I returned again, and the sea had disappeared. I inquired of a solitary man whom I encountered, when this change had taken place; and he gave me the

same reply.

"Finally, after an equal lapse of time, I returned once more, to find a flourishing city, more populous and richer in monuments than that which I had first visited; and when I sought information as to its origin, its inhabitants replied: 'The date of its foundation is lost in antiquity. We do not know how long it has existed and our fathers knew no more of this than we do.'"

How this fable illustrates the brevity of human memory and the narrowness of our horizons in time as well as in space! We think that the earth has always been what it now is; we conceive with difficulty of the secular changes through which it has passed; the vastness of these periods overwhelms us, as in astronomy we are overwhelmed by the vast distances of space.

The time had come when Paris had ceased to be the capital of the world.

After the fusion of the United States of Europe into a single confederation, the Russian republic from St. Petersburg to Constantinople had formed a sort of barrier against the invasion of the Chinese, who had already established populous cities on the shores of the Caspian sea. The nations of the past having disappeared before the march of progress, and the nationalities of France, England, Germany, Italy and Spain having for the same reason passed away, communication between the east and west, between Europe and America, had become more and more easy; and the sea being no longer an obstacle to the march of humanity, free now as the sun, the new territory of the vast continent of America had been preferred by industrial enterprise to the exhausted lands of western Europe, and already in the twenty-fifth century the center of civilization was located on the shores of Lake Michigan in a new Athens of nine million inhabitants, rivalling Paris. Thereafter the elegant French capital had followed the example of its predecessors, Rome, Athens, Memphis, Thebes, Nineveh and Babylon. The wealth, the resources of every kind, the great attractions, were elsewhere.

In Spain, Italy and France, gradually abandoned by their inhabitants, solitude spread slowly over the ruins of former cities. Lisbon had disappeared, destroyed by the sea; Madrid, Rome, Naples and Florence were in ruins. A little later, Paris, Lyons and Marseilles were overtaken by the same fate. Human types and languages had undergone such transformations that it would have been impossible for an ethnologist or a linguist to discover anything belonging to the past. For a long time neither Spanish, Portuguese, Italian, French, English nor German had been spoken. Europe had migrated beyond the Atlantic, and Asia had invaded Europe. The Chinese to the number of a thousand million had spread over western Europe. Mingling with the Anglo-Saxon race, they formed in some measure a new one. Their principal capital stretched like an endless street along each side of the canal from Bordeaux to Toulouse and Narbonne. causes which led to the foundation of Lutetia on an island in the Seine, which had raised this city of the Parisians to the zenith of its power in the twenty-fourth century, were no longer operative, and Paris had disappeared simultaneously with the causes to which it owed its origin and splendor. Commerce had taken possession of the Mediterranean and the great oceanic highways, and the Iberian canal had become the emporium of the world.

The littoral of the south and west of ancient France had been protected by dikes against the invasion of the sea, but, owing to the increase of population in the south and southwest, the north and northwest had been neglected, and the slow and continual subsidence of this region, observed ever since the time of Cæsar, had reduced its level below that of the sea; and as the channel was ever widening, and the cliffs between Cape Helder and Havre were being worn away by the action of the sea, the Dutch dikes had been abandoned to the ocean, which had invaded the Netherlands, Belgium, and

Rotterdam, Antwerp, Versailles, Lille, the December solstice with perihelion, Amiens and Rouen had sunk below the and was renewed every 25,765 years. water, and ships floated above their seacovered ruins.

Paris itself, finally abandoned in the sixto the height of the towers of Notre deposits at the bottom of the ocean cov-

Dame, and all that memorable plain, where were wrought out, during so many years, the most brilliant of the world's civilizations, was swept by angry waves.*

As in the case of languages, ideas, customs and laws, so, also, the manner of reckoning time had changed. It was still reckoned by years and centuries, but the Christian era had been discarded, as also the holy days of the calendar and the eras of the Mussulman, Jewish, Chinese and African chronologies. There was now a single calendar for the entire race, composed of twelve months, divided into four equal trimesters of three months of thirtyone, thirty, and thirty days, each trimester con-

taining exactly thirteen weeks. New geographical maps of history. Year's Day was a fête day, and was not tile year there were two. The week had Arab of the thirteenth century mentioned The era, a purely astronomical division sands of years that one must reckon if

northern France. Amsterdam, Utrecht, of time, began with the coincidence of This rational method had succeeded the fantastic divisions of time formerly in use.

The geographical features of France, tieth century, when the sea had surround- of Europe and of the entire world had beed it as it now does Havre, was, in the come modified, from century to century. eighty-fifth century, covered with water Seas had replaced continents, and new

ered the vanished ages, forming new geological strata. Elsewhere, continents had taken the place of seas. At the mouth of the Rhone, for example, where the dry land had already encroached upon the sea from Arles to the littoral, the continent gained to the south; in Italy, the deposits of the Po had continued to gain upon the Adriatic, as those of the Nile, the Tiber, and other rivers of later origin, had gained upon the Mediterranean; and in other places the dunes had increased, by various amounts, the domain of the dry land. The contours of seas and continents had so changed that it would have been absolutely impossible to make out the ancient



THE VILLAGE CEMETERY.

The historian of nature does not deal reckoned in with the year; every bisex- with periods of five centuries, like the been retained. Every year commenced in the legend related a moment ago. Ten on the same day-Monday; and the same times this period would scarcely suffice dates always corresponded to the same to modify, sensibly, the configuration of days of the week. The year began with the land, for 5000 years are but a ripple on the vernal equinox all over the world. the ocean of time. It is by tens of thou-

^{*} In the nineteenth century, researches in natural history had revealed the fact that secular vertical oscillations, varying with the locality, were taking place in the earth's crust, and had proved that, from pre-instoric times, the soil of western and southern France had been slowly sinking and the sea slowly gaining upon the land. One after another, the islands of Jersey, of Minquiers, of Chausey, of Rerehous, of Cezembre, of Mont-Saint-Michel, had been detached from the continent by the sea; the cities of Is, Helion, Tommen, Portzmehr, Harbour, Saint Louis, Monny, Bourgneuf, La Feillette, Paluel and Nazado had been buried beneath its waves, and the Armorican peninsula had slowly retreated before the advancing waters. The hour of this invasion by the sea had struck, from century to century, also for Herbavilla, to the west of Nantes; for Saint-Denis-Chef-de-Caux, to the north of Havre; for Saint-Eticane-de-Panlel and for Gardoine, to the morth of Dol; for Tolente, to the west of Brest; more than eighty habitable cities of Holland had been submerged in the eleventh century, etc., etc. In other regions the reverse had taken place, and the wearing away of the shores had, in less than 7000 years, made Paris accessible to ships of the greatest tonnage.

level of seas, and new territories emerging into the sunlight, as the result of the secular changes in the level of the earth's crust, whose thickness and density varies from place to place, and whose weight, resting upon the still plastic and mobile interior, causes vast areas to oscillate. A slight disturbance of the equilibrium, an insignificant dip of the scales, a change of less than a hundred meters, often, in the length of the earth's diameter of twelve thousand kilometers, is sufficient to transform the surface of the world.

And if we examine the ensemble of the history of the earth, by periods of 100,-000, years for example, we see, that in ten of these great epochs, that is, in a million years, the surface of the globe has

been many times transformed.

If we advance into the future a period of one or two million years, we witness a vast flux and reflux of life and things. How many times in this period of ten or twenty thousand centuries, how many times have the waves of the sea covered the former dwelling-places of man! How many times the earth has emerged anew, fresh and regenerated, from the abysses of the ocean! In primitive times, when the still warm and liquid planet was covered only by a thin shell, cooling on the surface of the burning ocean within, these changes took place brusquely, by sudden breaking down of natural barriers, earthquakes, volcanic eruptions, and the uprising of mountain ranges. Later, as this superficial crust grew thicker and became consolidated, these transformations were more gradual; the slow contraction of the earth had led to the formation of hollow spaces within the solid envelope, to the falling in of portions of this envelope upon the liquid nucleus, and finally to oscillating movements which had changed the profile of the continents. Later still, insensible modifications had been produced by external agents; on the one hand the rivers, constantly carrying to their mouths the débris of the mountains, had filled up the depths of the sea and slowly increased the area of the dry land, making in time inland cities of ancient seaports; and on the other hand, the acarea of the ocean at the expense of the dry piration was to be someone rather than

one would see continents sink below the land. Ceaselessly the geographical configuration of the shore had changed, For the historian our planet had become another world. Everything had changed: continents, seas, shores, races, languages, customs, body and mind, sentiments, ideas-everything. France beneath the waves, the bottom of the Atlantic in the light of the sun, a portion of the United States gone, a continent in the place of Oceanica, China submerged; death where was life, and life where was death; and everywhere sunk into eternal oblivion all which had once constituted the glory and greatness of nations. If today one of us should emigrate to Mars, he would find himself more at home than if, after the lapse of these future ages, he should return to the earth.

While these great changes in the planets were taking place, humanity had continued to advance; for progress is the supreme law. Terrestrial life, which began with the rudimentary protozoans, without mouths, blind, deaf, mute and almost wholly destitute of sensation, had acquired successively the marvellous organs of sense, and had finally reached its climax in man, who, having also grown more perfect with the lapse of centuries, had risen from his primitive savage condition as the slave of nature to the position of a sovereign who ruled the world by mind, and who had made it a paradise of happiness, of pure contemplation, of knowledge and of pleasure.

Men had attained that degree of intelligence which enabled them to live wisely and tranquilly. After a general disarmament had been brought about, so rapid an increase in public riches and so great an amelioration in the well-being of every citizen was observed, that the efforts of intelligence and labor, no longer wasted by this intellectual suicide, had been directed to the conquest of new forces of nature and the constant improvement of civilization. The human body had become insensibly transformed, or more exactly,

transfigured. Nearly all men were intelligent. They tion of the waves and of storms, constantly remembered with a smile the childish eating away the shores, had increased the ambitions of their ancestors whose as-

learned that happiness resides in the soul, that contentment is found only in study that love is the sun of the heart, that life is short and ought not to be lived superficially; and thus all were happy in the possession of liberty of conscience, and careless of those things which one can-

not carry away.

Woman had acquired a perfect beauty. Her form had lost the fullness of the Greek model and had become more slender; her skin was of a translucent whiteness; her eyes were illuminated by the light of dreams; her long and silky hair, in whose deep chestnut were blended all the ruddy tints of the setting sun, fell in waves of rippling light; the heavy animal jaw had become idealized, the mouth had grown smaller, and in the presence of its sweet smile, at the sight of its dazzling pearls between the soft rose of the lips, one could not understand how lovers could have pressed such fervent kisses upon the lips of women of earlier times, specimens of whose teeth, resembling those of animals, had been preserved in the museums of ethnography. It really seemed as if a new race had come into existence, infinitely superior to that to which Aristotle, Kepler, Victor Hugo, Phryne, or Diana of Poictiers had belonged.

Thanks to the progress in physiology, hygiene, and antiseptic science, as well as to the general well-being and intelligence of the race the duration of human life had been greatly prolonged and it was not unusual to see persons who had attained the age of 150 years. Death had not been conquered, but the secret of living without growing old had been found, and the characteristics of youth were retained be-

yond the age of 100.

But one fatherland existed on the planet, which, like a chorus heard above the chords of some vast harmony, marched onward to its high destiny, shining in the splendor of intellectual supremacy.

and warmth of the sun, terrestrial mag- secrated by more than 10,000 years of netism, atmospheric electricity, inter- ancestry. What remains of all who have planetary attraction, the psychic forces swarmed in this forum of the world? What of the human soul, the unknown forces is left of the Romans, the Greeks, and the which preside over destinies,-all these Asiatics, whose empires lasted for centuscience had conquered and controlled for ries? What remains of the millions who

something, and who had struggled so the benefit of mankind. The only limfeverishly for outward show. They had its to its conquests were the limitations of the human faculties themselves, which, indeed, are feeble, especially when we compare them with those of certain extra-terrestrial beings.

> All the results of this vast progress, so slowly and gradually acquired by the toil of centuries, must, in obedience to a law, mysterious and inconceivable for the petty race of man, reach at last their apogee, when further advance becomes impossible. The geometric curve which represents this progress of the race, falls as it rises: starting from zero, from the primitive nebulous cosmos, ascending through the ages of planetary and human history to its lofty summit, to descend thereafter into a night that knows no morrow.

> Yes! all this progress, all this knowledge, all this happiness and glory, must one day be swallowed up in oblivion, and the voice of history itself be forever silenced. Life had a beginning: it must have an end. The sun of human hopes had risen, had ascended victoriously to its meridian, it was now to set and to dis-

appear in endless night. To what end then all this glory, all this

struggling, all these conquests, all these vanities, if light and life must come to an

end?

Martyrs and apostles, in every cause, have poured out blood upon the earth, destined in its turn also to perish.

Everything is doomed to decay, and death must remain the final sovereign of the world. Have you ever thought, in viewing a village cemetery, how small it is, to contain the generations buried there from time immemorial? Man existed before the last glacial epoch, which dates back 200,000 years; and the age of man extends over a period of more than 250,ooo years. Written history dates from yesterday. Cut and polished flints have been found at Paris, proving the presence of man on the banks of the Seine long before the first historic record of the Gauls. The Parisians of the close of the The internal heat of the globe, the light nineteenth century walk upon ground con-



THE RUINS OF PARIS.

have existed? Not even a handful of ashes. A human being dies every second, or about 86,000 a day, and an equal number, or to speak more exactly, a little more than 86,000 are born daily. This figure, true for the nineteenth century, applies to a long period, if we increase it proportionately to the time. The population of the globe has increased from epoch to epoch. In the time of Alexander there were perhaps a thousand million living beings on the surface of the earth. At the end of the nineteenth century fifteen hundred million; in the twenty-second century two thousand million; in the twenty-ninth three thousand million; at its maximum the population of the globe had reached one hundred thousand million. Then it had begun to decrease.

Of the innumerable human bodies which have lived, not one remains. All have been resolved into their elements, which have again formed new individuals.

All that fills the passing day-labor, pleasure, grief and happiness-vanishes

past exists no longer; what has been, has disappeared in the gulf of eternity. The visible world is vanishing every instant. Only the invisible is real and enduring.

During the ten million years of history, the human race, surviving generation after generation, as if it were a real thing, had been greatly modified from both a physical and moral point of view. had always remained master of the world, and no new race had aspired to its sovereignty; for races do not come down from heaven or rise from hell: no Minerva is born full-armed, no Venus awakes fullgrown in a shell of pearl on the seashore; everything grows, and the human race, with its long line of ancestry, was from the very beginning the natural result of the vital evolution of the planet. Under the law of progress, it had emerged from the limbo of animalism, and by the continued action of this same law of progress it had become gradually perfected, modified and refined.

But the time had come when the condiwith it into oblivion. Time flies, and the tions of terrestrial life began to fail; was itself to enter upon its downward

The internal heat of the globe, still considerable in the nineteenth century, although it had ceased to have any effect upon surface temperature, which was maintained solely by the sun, had slowly diminished, and the earth had, at last, This had not become entirely cold. directly influenced the physical conditions of terrestrial life, which continued to depend upon the atmosphere and solar heat. The cooling of the earth cannot bring about the end of the world.

Imperceptibly, from century to century, the earth's surface had become levelled. The action of the rain, snow, frost and solar heat upon the mountains, the waters of torrents, rivulets and rivers, had slowly carried to the sea the débris of every continental elevation. The bottom of the sea had risen, and in nine million years the mountains had almost entirely disapold faster than the sun; the conditions favorable to life had disappeared more rapidly than the solar light and heat.

This conception of the planet's future conforms to our present knowledge of the universe. Doubtless, our logic is radically incomplete, puerile even, in comparison with the real and eternal Truth, and might be justly compared with that of two ants talking together about the history of France. But, confessing the modesty which befits the finite in presence of the infinite, and acknowledging our nothingness as compared with the universe, we cannot avoid the necessity of appearing logical to ourselves; we cannot assume that the abdication of reason is a better proof of wisdom than the use of it. We believe that an intelligent order presides over the universe and controls the destiny of worlds and their inhabitants; that the larger members of the solar system must last longer than the lesser ones, indefinitely, any more than the sun itself. Moreover, direct observation confirms this mense, is still in its youth. The moon, insensibly filling every void, every fissure,

when humanity, instead of advancing, smaller than Mars, has reached the more advanced stages of astral life, perhaps even has reached its end. Mars, smaller than the earth, is more advanced than the earth and less so than the moon. Our planet, in its turn, must die before Jupiter, and this, also, must take place before the sun becomes extinct.

> Consider, in fact, the relative sizes of the earth and the other planets. diameter of Jupiter is eleven times that of the earth, and the diameter of the sun about ten times that of Jupiter. diameter of Saturn is nine times that of the earth. It seems to us, therefore, natural to believe that Jupiter and Saturn will endure longer than our planet, Venus, Mars or Mercury, those pigmies of the

system!

Events justified these deductions of science. Dangers lay in wait for us in the immensity of space; a thousand accidents might have befallen us, in the form of comets, extinct or flaming suns, peared. Meanwhile, the planet had grown nebulæ, etc. But the planet did not perish by an accident. Old age awaited the earth, as it waits for all other things. and it grew old faster than the sun. It lost the conditions necessary for life more rapidly than the central luminary lost its heat and its light.

During the long periods of its vital splendor, when, leading the chorus of the worlds, it bore on its surface an intelligent race, victors over the blind forces of nature, a protecting atmosphere, beneath which went on all the play of life and happiness, guarded its flourishing empires. An essential element of nature, water, regulated terrestrial life; from the very beginning this element had entered into the composition of every substance, vegetable, animal and human. It formed the active principle of atmospheric circulation; it was the chief agent in the changes of climate and seasons; it was the sovereign of the terrestrial state.

From century to century the quantity and, consequently, that the life of each of water in the sea, the rivers and the atplanet is not equally dependent upon mosphere diminished. A portion of the the sun, and cannot, therefore, continue rain water was absorbed by the earth, and did not return to the sea; for, instead of flowing into the sea over impermeable general conception of the universe. The strata and so forming either springs or earth, an extinct sun, has cooled more subterranean and submarine watercourses, rapidly than the sun. Jupiter, so im- it had filtered deeper within the surface,

and saturating the rocks to a great depth. So long as the internal heat of the globe was sufficient to prevent the indefinite descent of this water, and to convert it into vapor, a considerable quantity remained upon the surface; but the time came when the internal heat of the globe was entirely dispersed in space and offered no obstacle to infiltration. Then the surface water gradually diminished; it united with the rocks, in the form of hydrates, and thus disappeared from circulation.

Indeed, were the loss of the surface water of the globe to amount only to a few tenths of a millimeter yearly, in ten million years none would remain.

This vapor of water in the atmosphere had made warmth and life possible; with its disappearance came cold and death. If at present the aqueous vapor of the atmosphere should disappear, the heat of the sun would be incapable of maintaining animal and vegetable life; life which, moreover, could not exist, inasmuch as vegetables and animals are chiefly composed of water.*

The invisible vapor of water, distributed through the atmosphere, exercises the greatest possible influence on temperature. In quantity this vapor seems almost negligeable, since oxygen and nitrogen alone form ninety-nine and one-half

per cent. of the air we breathe; and the remaining one-half of one per cent, contains, besides the vapor of water, carbonic acid, ammonia and other substances. There is scarcely more than a quarter of one per cent, of aqueous vapor. If we consider the constituent atoms of the atmosphere, the physicist tells us that for two hundred atoms of oxygen and nitrogen there is scarcely one of water-vapor; but this one atom has eighty times more absorptive energy than the two hundred others.

The radiant heat of the sun, after traversing the atmosphere, warms the surface of the earth. The heat waves reflected from the warmed earth are not lost in space. The aqueous vapor atoms, acting like a barrier, turn them back and preserve them for our benefit.



"RUDIMENTARY SPECIES OF CRYPTOGAMS ONLY SURVIVED."

Of all terrestrial substances water has the greatest specific heat. It cools more slowly than any other. Its specific heat is four times greater than that of air. When the temperature of a kilogram of water falls one degree, it raises the temperature of four kilograms of air one degree. But water is seven hundred and seventy times heavier than air, so that if we compare two equal volumes of water and air, we find that a cubic meter of water, in losing one degree of temperature, raises the temperature of seven hundred and seventy times four, or 3080 cubic meters of air by the same amount. This is the explanation of the influence of the sea in modifying the climate of continents. The heat of summer is stored in the ocean and is slowly given out in winter. This explains why islands and seashores have no extremes of climate. The heat of summer is tempered by the breezes, and the cold of winter is alleviated by the heat stored in the water.

This is one of the most brilliant and the oxides and hydrates, in about eight millmost fruitful discoveries of modern physics. The oxygen and nitrogen molecules of dry air do not oppose the radiation of heat; but, as we have just said, one molecule of water-vapor possesses eighty times the absorptive energy of the other two hundred molecules of dry air, and consequently such a molecule is sixteen thousand times more efficacious in so far as the conservation of heat is concerned. So that it is the vapor of water and not the air properly speaking, which regulates the conditions of life upon the

If one should remove this vapor from the surrounding atmosphere, a loss of heat would go on at the surface similar to that which takes place in high altitudes, for the atmosphere would then be as powerless to retain heat as a vacuum is. cold like that at the surface of the moon would be the result. The soil would still receive heat directly from the sun, but even during the daytime this heat would not be retained, and after sunset the earth would be exposed to the glacial cold of space, which appears to be about 273° below zero. Thus vegetable, animal and human life would be impossible, if it had not already become so, through the very

disappearance of the water.

Certainly we may and must admit that water has not been so essential a condition of life on all the worlds of space as it has been upon our own. The resources of nature are not limited by human observation. There must be, there are, in the limitless realms of space, millions and millions of suns differing from ours, systems of worlds in which other substances, ical and mechanical conditions, other environments, have produced beings absolutely unlike ourselves, living another life, possessed of other senses, differing in organization from ourselves far more than the fish or mollusk of the deep sea differs from the bird or the butterfly. But we are here studying the conditions of terrestrial life, and these conditions are planet itself.

The gradual filtration of water into the interior of the earth, keeping pace with the radiation of the earth's original heat into space, the slow formation of

ion years reduced by three-fourths the quantity of water in circulation on the earth's surface. As a consequence of the disappearance of continental elevations, whose débris, obeying passively the laws of gravity, were slowly carried by the rain, the wind, and the streams to the sea, the earth had become almost level and the seas more shallow; but as evaporation and the formation of aqueous vapor goes on only from the surface and does not depend upon the depth, the atmosphere was still rich in vapor. The conditions of life upon the planet were then similar to those we now observe on Mars; where we see that great oceans have disappeared or have become mere inland seas of slight depth, that the continents are vast plains, that evaporation is active, that a considerable quantity of aqueous vapor still exists, that rains are rare, that snows abound in the polar regions and are almost entirely melted during the summer of each year,-in short, a world still habitable by beings analogous to those that people the earth.

This epoch marked the apogee of the human race. Thenceforward the conditions of life grew less favorable, and from century to century, from generation to generation, underwent marked change. Vegetable and animal species, the human race itself, everything in short, became transformed. But whereas, hitherto, these metamorphoses had enriched, embellished and perfected life, the day had come when

decadence was to begin.

During more than a hundred thousand years it was insensible, for the parabolic curve of life did not suddenly fall away other chemical combinations, other phys- from its highest point. Humanity had reached a degree of civilization, of intellectual greatness, of physical and moral well-being, of scientific, artistic and industrial perfection, incomparably beyond anything of which we know. For several million years the central heat of the globe had been utilized in winter for general warming purposes by towns, villages, manufactories and every variety of indusdetermined by the constitution of the try. When this failing source of heat had finally become exhausted, the heat of the sun had been stored subject to the wants of the race, hydrogen had been extracted from sea-water, the energy of waterfalls, and subsequently that of the tides, had

the entire planet had become the plaything of science, which disposed at will of all rigid. The seas which remained were conits elements. The human senses, perfec- fined to the tropics. The poles were froted to a degree which we should now zen. The continents of olden times, where qualify as supernatural, and those newly so many other foci of civilization had acquired, mentioned above, become with shone so brilliantly, were immense desbody and the gross appetites of former condensers of snow.

times forgotten; the psychic faculties in perpetual play, acting at a distance over the entire surface of the globe, communicating under certain conditions with even the inhabitants of Mars and Venus; apparatus which we cannot imagine replacing those optical instruments with which physical astronomy had begun its investigations; the whole world made new in its perceptions and interests; an enlightened social condition from which envy and jealousy, as well as robbery, suffering and murder had disappeared,this, indeed, was a real humanity of flesh and bone like our own, but as far above it in intellectual supremacy as we are above the simians of the tertiary epoch.

Human intelligence had so completely mastered the forces of nature that it seemed as if so glorious an era never could come to an end. The decrease in

the amount of water, however, commenced

been transformed into light and heat, and ified. Oscillations of the surface were no longer possible, for it had become entirely the lapse of time more highly developed; erts. Step by step humanity had mihumanity released more and more from grated toward the tropical zone, still the empire of matter; a new system of watered by streams, lakes and seas. alimentation; the spirit governing the There were no more mountains, no more



POSSIL SPECIMENS OF THE XXTH CENTURY

As the quantity of water and rainfall to alarm even the most optimistic. The diminished, and, as the springs failed great oceans had disappeared. The crust and the aqueous vapor of the atmosof the earth, once so thin and mobile, had phere grew less, vegetation had entirely gradually increased in thickness, and, not-changed its aspect, increasing the volwithstanding the internal pressure, the ume of its leaves and the length of its earth had become almost completely solid-roots, seeking in every way to absorb

which had not been able to adjust themselves to the new conditions had vanished; the rest were transformed. Not lengthened. This slower rotatory motion a tree or a plant with which we are of the earth, increase in the distance of familiar was to be seen. There were no the moon, and lengthening of the lunar oaks, nor ashes, nor elms, nor willows, and the landscape bore no resemblance the tides, whose action resembled that of to that of today. Rudimentary species a brake. If the earth and the moon last

of cryptogams only survived.

Like changes had taken place in the animal kingdom. Animal forms had been greatly modified. The wild species had either disappeared or been domesticated. The scarcity of water had modified the food of herbivora as well as carnivora. The more recent species, evolved from those which preceded them, were smaller, number of plants had sensibly decreased. Less of the carbonic acid of the air was absorbed, and a proportionally greater quantity existed in the atmosphere. As for the human race, its metamorphosis was so absolute that it was with an astonishment bordering on incredulity that one saw in geological museums fossil specimens of men of the twentieth or one hun-

dredth century, with great brutal teeth and coarse intestines; it was difficult to admit that organisms so gross could really be the ancestors of intellectual man.

Though millions of years had passed, the sun still poured upon the earth almost the same quantity of heat and light. At most, the loss had not exceeded one-tenth. The only difference was that the sun appeared a little yellower and a little smaller.

The moon still revolved about the earth, but more slowly. Its distance from the

the humidity necessary for life. Species earth had increased and its apparent diameter had diminished. At the same time the period of the earth's rotation had month, were the results of the friction of long enough, and there are still oceans and tides, calculation would enable us to predict that the time would come when the periodic time of the earth's rotation would finally equal the lunar month, so that there would be but five and one-quarter days in the year: the earth would then always present the same side to the moon. But this would require more than 150 millwith less fat and a larger skeleton. The ion years. The period of which we are speaking, ten million years, is but a fifteenth of the above; and the time of the earth's rotation, instead of being seventy times, was only four and one-half times greater than it now is, or about 110 hours.

These long days exposed the earth to the prolonged action of the sun, but except in those regions where its rays were normal to the surface, that is to say in the

> equatorial zone between the two tropical circles, this exposure availed nothing; the obliquity of the ecliptic had not changed; the inclination of the axis of the earth being the same, about two degrees, and the changes in the eccentricity of the earth's orbit had produced no sensible effect upon the seasons or the climate.

The human form, food, respiration, organic functions, physical and intellectual life, ideas, opinions, religion, science, languageall had changed. Of present man almost nothing survived.



DEATH THE FINAL SOVEREIGN OF THE WORLD.

(Concluded in the August Number.)



THE SWISS REFERENDUM,

THE IDEAL REPUBLICAN GOVERNMENT.

By W. D. MCCRACKAN.

In a meadow near Altdorf, Switzerland, some fifteen hundred voters are ranged around in a circle. Their chief magistrate stands in the center, delivering an opening speech. The clerk sits writing at a table, and the crier, with his beadles, resplendent in cocked hats and cloaks of orange and black, are installed upon a raised platform on one side. A fringe of women and children watch the proceedings from near by. The annual Landsgemeinde, or open-air assembly, of canton Uri is in session.

Suddenly the crowd rises, and, standing bare-headed, silently unites in prayer. During this solemn pause the surpassing grandeur of the surroundings imposes itself. It is May. The land is all aglow: fresh, sprouting, living. The noonday sun draws a warm smell of spring from the level stretches of the valley, radiant in their first flowers. Fruit-trees in blossom dapple the new grass that is soft as plush,

vivid and juicy. The great fraternity of mountains look on, draped in firs up to the limit of the tree-line, then carpeted with summer pastures that reach to melting snow-patches and barren summits.

While the people pray in silence, cowbells tinkle on the common; a boy shouts from the slope; where his goats are nibbling in the bushes; the wayside inns are loud with harsh laughter, scraps of songs and clinking glasses.

All at once the business of the meeting begins. Bills and reports are presented, discussed in the guttural native dialect, and voted by a show of hands. Then comes the election of officers, each result being announced by the crier, who raises his hat and repeats a set formula. After the oath has been administered to the new magistrates, some miscellaneous business is transacted, and the assembly adjourns till next May. The session has lasted perhaps four hours.

can depart very far from it without sacri- disapproval. ficing what is best in its political life.

to the representative government. The confederation. In the United States, the declares: "Federal laws shall be subturned into municipalities. They are almost exact counterparts of the Landsgein environment. You have only to substitute a hall for a meadow, the bleak, unkindly scenery of a Massachusetts March for the genial glow of an Alpine May, and a good deal of nasal Yankee dialect for guttural "Schwizerdütsch;" but, in the main, the questions treated are the same. In both assemblies, freedom of discussion is tempered by a certain instinct for the orderly conduct of business, which freemen transmit to each other from generation to generation. The old Landsgemeinden were training-schools for the peasants who founded the Swiss confederation, the New England townmeetings for the patriots of the Revolution.

But how is it possible to retain this simple form in the midst of our complex modern civilization? The Swiss people have answered this question with the referendum and the initiative. They have evolved and perfected a contrivance in political machinery which preserves the essence of the public assembly, and grafts it upon the representative system.

The referendum and initiative virtually enable large bodies of voters to govern themselves, directly, without actually meeting together. In a political sense, they annihilate space. In substance, the referendum is an institution by virtue of which laws, framed by representatives, are referred to the people for final acceptance or rejection. The initiative is the right of a voter, or a body of voters, to initiate proposals for legislation. The writer, however, will be obliged to confine himself to the referendum in this article. This institution may be optional

Nothing could be simpler than the or compulsory, i. e., either all laws must Swiss Landsgemeinde. It is the natural be submitted, or only certain kinds; but method of free government, the classic in any case it enables voters to stamp the model of direct democracy. No nation acts of their legislators with approval or

At present all the Swiss cantons have in-As a matter of fact, however, this ideal corporated the referendum, in some form form has almost everywhere succumbed or other, into their constitutions, except Fribourg, which rather makes a merit of Landsgemeinde flourishes in only two resisting all innovations. The federal cantons and four half-cantons, out of a to- constitution itself contains a provision tal of twenty-five which compose the Swiss for an optional referendum. Article 80 Massachusetts town-meetings are being mitted for acceptance or rejection by the people, if the demand is made by 30,000 voters or by eight cantons. The same meinden, in spite of an entire difference principle applies to federal resolutions which have a general application, and which are not of an urgent nature.'

In practice, it has been found rather difficult to determine what laws have a general application or are of an urgent nature. But when the federal assembly has decided that a bill must be referred to the people, then it is published and copies sent to the governments of the cantons and the communes. It remains on probation for ninety days. If, during that time, the demand for a popular vote is made by 30,000 voters, or by eight cantons, the signatures being carefully attested by the proper authorities, the federal council fixes a date for the popular vote, which must be at least four weeks after the first announcement. The voting is done on the same day throughout the confederation, and the ballots are simply marked "Yes" or "No." Should the ninety days of probation pass without giving rise to a demand for a popular vote, then the law is considered to have been tacitly accepted.

In the cantonal governments the referendum assumes a great variety of forms: from the Valais, where only financial measures, involving an expenditure of 60,000 francs are referred, to the half-canton of Baselland, where practically the whole business of the legislature is submitted to popular verdict. When the optional referendum is used, thirty days are usually allowed for collecting the necessary number of signatures. In general the compulsory referendum is preferred, because it does not entail as much partisan

agitation.

As a matter of fact the referendum in

its complete form is a modern invention. based upon an ancient practice. The very name explains its historical origin. When the deputies of the thirteen states that composed the old federation sat in their diets, they were in the habit of passing measures subject to the approval of their home governments. This reservation was expressed by the Latin formula ad referendum. In 1830 the canton of St. Gallen admitted a provision into its constitution under the name of veto, which specified that laws should be submitted to the people, if a certain number of voters made the demand. The institution was soon copied by other cantons, and thus started on its tour through the confederation, acquiring the name of the referendum.

It is interesting to notice how truly the objections made by the opponents of the referendum confirm the claims of its partisans. At the present time this institution is being warmly discussed in Belgium. The king has even pronounced himself in favor of a royal referendum to cover certain subjects of legislation. In view of the interest manifested in that country a M. Simon Deploige, took pains to examine the working of the system in Switzerland. He came to the con-

clusion (Le Referendum en Suisse, Bruxelles, 1892), that it would not do for Belgium, and on the whole seemed to question its success even in the land of its origin.

Some of his criticisms are at least suggestive. He advances the common argument that the people at large are not competent to judge of complex legislative questions. This objection springs from the monarchical conception that government officials are public masters, not servants. It overlooks the fundamental principle of democracy, that the people constitute the only repository of political power. Democracy must stand or fall by that dictum. In reality the capacity of a people to govern themselves need not even be considered. All men have the right to self-government, whether they do it well or ill.

Mr. Bryce realizes the advantages of the referendum when he says: "nor should it be forgotten that in a country where law depends for its force on the consent of the government, it is eminently desirable that law should not outrun popular sentiment, but have the whole weight of the people's deliverance behind it." If the people cannot discriminate properly it only proves that legislative questions ought to be simplified, and the innumerable complex side issues obliterated. Deploige cites colonial enterprises to illustrate his objection. "The people," he says, "only see the immediate outlay in men and money and cannot appreciate the ultimate gain in foreign possessions." The truth is, the people know too well that they pay the bills and a few adventurers reap the harvest. No greater tribute to the wisdom of the masses could be given than is implied in this censure. referendum acts as an educational thermometer to gauge the popular political education.

But the dignity and power of parliaments would be compromised! Say rather, their squabbles and tyrannies would be checked. Voters are anxious to distinguish between men and measures. The world is tired of parties, whose business it is to oppose and obstruct each other at all hazards, in wordy sham

methods in making laws. Certainly the Swiss federal assembly and the cantonal over and the harm is done. councils have lost none of their weight since the introduction of the referendum.

Some timid souls fear that the gates would be thrown open to transient or revolutionary measures. The experience of forbids the piling up of laws, and acts as a drag on hasty legislation. Out of nineteen federal bills so far referred to the popular verdict, only six were accepted, good people must be well aware that such methods are effective only when the representatives can be persuaded that they will fail of reëlection, unless they comply with the wishes expressed.

Perhaps the most reasonable objection which can be made to the referendum is that the press would, after all, dictate the popular verdict; that enterprising corruptionists could still buy it up, and great corporations rule the country. In the personally. Then direct democracy gives first place, it must be said that Switzer- place to a representative system of govland has not suffered from this cause, and, ernment. The people cease to exercise besides, the venality of the press is essentheir sovereign rights in person, they are tially an economic evil which cannot be cured until the monopolistic privileges of great corporations are abolished. referendum is a reform in political machinery solely. It is not a cure-all; but it will help the people to reach down to those fundamental problems which must be solved if the world is to progress.

There may still be some intelligent men who are satisfied with the working of representative government in the United States. But they cannot realize its inconsistencies and abuses. In state and federal legislatures, representatives are elected by a fraction only of the people, the unsuccessful voters being as completely disfranchised as though they were actually deprived of their ballots. Practically. therefore, our representative system belies its very name-it does not represent. Some plan of proportional representation is urgently needed to correct this primary fault. But even with this improvement made, the people have no guarantee that obnoxious legislation will not be forced science of legislation. upon them. Once elected, representatives

There is a demand for business have a free hand; there is no way of calling them to account, until their terms are

> In truth there must be a return to first principles, to purer forms and straightforward methods.

Given a small body of freemen, how will they naturally proceed to govern them-Switzerland proves that the referendum selves? They will unconsciously imitate the Swiss Landsgemeinde or the New England town-meeting. Briefly stated. they will meet at fixed times to settle matters of common interest, to elect offiwhile thirteen were rejected. Others urge cers from their number, commissioned to that right of public meeting and the carry out the laws they may pass, and to privilege of communicating directly with draw up a set of rules, or a constitution. representatives ought to suffice. But these In some races the instinct for self-government is more strongly developed than in others. In the United States men invariably organize on this principle, whether they propose to found a settlement a farmer's alliance, or a boat club.

The chances are that a body of freemen will continue to govern themselves in this manner, until population and territory have increased so much that it becomes a physical impossibility for them to meet gradually weaned from self-government, and the professional politician makes his appearance.

This is the critical moment in the history of every democracy. The people,) having once surrendered direct government, almost always become the prey of party bosses. The referendum alone is capable of restoring to them that personal exercise of political rights which is the heritage of freemen.

If there is anyone whom the practical politician professes to despise, and invariably dreads, it is the man who treats legislation seriously-as a science. He calls him a theorist, a college professor, and other bad names. And yet, when all is said and done, even our happy-go-lucky methods of making laws must rest upon some scientific basis. As it was reserved for modern students to discover that political economy had definite laws of its own, so it is the duty of the present generation to determine the rules which govern the

The principle of the referendum is by

no means a novelty in the United States. Constitutional amendments are referred to popular vote in every state of the Union except Delaware. "Local option" is in itself a form of referendum. Throughout the country there are many examples in counties, cities, townships and school districts. The other day the voters of Somerville, a suburb of Boston, met in a general assembly to consider the question of annexation to that city. It was a perfectly legal, city town-meeting, and an application of pure democracy to municipal What is needed now is to harmethods. monize these various forms, to increase their efficiency, and widen their applicability. It would be wise to select some one state perhaps, in order to develop the referendum within its jurisdiction in a systematic manner, according to the best tenets of legislative science.

Several state supreme courts have already asserted the competence of legislatures to refer laws to the electors. A rider might be attached to any state bill, specifying that it should not go into effect

until the people had voted upon it. In this manner federal legislation itself might be submitted to the referendum. Great measures, affecting the whole Union, could not be passed unless they were approved by at least a majority of the citizens.

The rapidity with which this question of the referendum has forced itself into public notice is truly astonishing. Five years ago its very name was unknown in this country. By degrees, a few newspaper and magazine articles began to describe its working in Switzerland; today it is a plank in the platform of every association for political reform. And, in truth, to adopt the referendum would be merely to live up to our professions. This country masquerades as a democracy. In fact, it is a political nondescript; for more than one radical reform must be accomplished before this pretense can be turned The referendum is an exinto reality. pression of that modern world-tendency which strives to assure to every individual those rights we justly call inalienable.



THE PETREL.

BY CLINTON SCOLLARD,

I TAKE my name from that apostle old
Who walked the waves of stormy Galilee;
And I, like him, through grace divine, am bold
To brave the deep, and triumph o'er the sea.



THE PILOT OF BELLE AMOUR.

BY GILBERT PARKER.

HE spirit of loneliness was strong garment of a fleeting cheerfulness, but its a jutting crag of the Cliff of the King. upon a prison wall. Because it jutted You could get to the hut by a hard climb over at the top, its gloom was vastly inup a precipitous pathway, or by a ladder creased on the side washed by the bay of of ropes which swung from his cottage Belle Amour. door down the cliff-side to the sands. The

in him. He lived in a little hut on cheerfulness was but as a flicker of light

The bay only at seasons shared the gloom bay that washed the sands was called of the cliff. Out of its shadow it was in Belle Amour. The cliff was huge, somber summer very bright and playful; someand stern; it had a terrible granite morosetimes boisterous, often idle, coquetting ness. If you had travelled back from its with the sands. There was a great differedge until you stood within the very heart ence between the cliff and the bay; but of Labrador, you would have added step the cliff was as it appeared, and the bay upon step of barrenness and austerity, was a shameless hypocrite. For, under In the short summer the cliff put on the one shoulder, it hid a range of reefs, and at a spot where the shadows of the cliff never reached, and the sun played with a grim kind of joy, a long needle of rock ran up at an angle under the water, ready and waiting to pierce irresistibly the adventurous ship that, in some mad moment, crept to its shores.

The man was more like the cliff than the bay. He was what he seemed-stern, powerful, brooding. His only companions were the Indians, who in summer time came and went, getting stores of him, which he in turn got from a post of the Hudson's Bay company, seventy miles up the coast. At one time the company, impressed by the number of skins carried to them by the pilot, and the stores he bought of them, had thought of establishing a post at Belle Amour; but they saw that his dealings with them were so fair, and that he had small profit, that they decided to use him as an unofficial agent, and reap what profit was to be had, as Kenyon, the company's things stood. agent, who had the post, was keen to know why Gaspard, the pilot, lived at Belle Amour; no white man near him save now and then a priest who travelled silently among the Indians, or some fisherman, hunter, or woodsman, who, for pleasure or in pure adventure, ran into the bay and tasted the hospitality tucked away on a ledge of the Cliff of the King.

But Kenyon was not the man; to him Gaspard was unresponsive, however adroit the catechism. After years had gone, where Gaspard came from, why he lived at Belle Amour, and the story of his life, was hardly found even in scrap of legend or idle tale. Imagination dies in the grim monotony of loneliness, and even Kenyon, alive at first to the desolate picturesqueness of the bay, the cliff and the man, ceased after a time to wonder. Touch the heart of a man with the point of an icicle and the glory of the glacier is lost to him. Cover his mind with a shadow of common drudgery and dreary sameness, and he sees no further than the toil of the hour and the common glut of bed and The good Father Dorval, who sometimes stepped across the dark threshold of Gaspard's hut, would have, for the man's soul's sake, dug out the heart of his secret; but Gaspard, open with food and fire and blanket and tireless attendance, closed like the doors of a dungeon

when the priest would have read him. At the name of good St. Anne he would make the sacred gesture, and would take a blessing when the priest passed from his hut to go again into the wilds; but when pressed upon another matter, he would always say: "Mon pére, I have nothing to confess." After a number of years the priest ceased to ask him, and he remained with the secret of his life, inscrutable, silent.

One, being vigilant, would have seen, however, that he lived in some land of memory or anticipation, beyond his life of daily toil and usual dealing. The hut seemed to have been built at a point where east and west and south the great gulf could be seen and watched. It seemed almost ludicrous that a man should call himself a pilot on a coast and at a bay where a pilot was not needed, maybe, once a year. But he was known as Gaspard, the pilot, and on those rare occasions when a vessel did anchor in the bay, he performed his duties with such a certainty that one could never have guessed how many death-traps crouched beneath the waters of Belle Amour. On such occasions Gaspard seemed to look twenty years younger; a light would come into his face, a stalwart kind of pride sit on him. If you had looked closely, though, you would have seen a strange, sardonic look in his deep eyes; such a grim furtiveness as though he should say: "If I but twist my finger we are all for the fishes!" And when the vessels were at anchor and the sailors were ashore, partaking of his simple hospitality, the same covert irony travelled with every look of his eye, while he gave them food or drink; as though he would say: "I hold a secret which would drive you mad.'

But he kept his secret and waited.

He never seemed to tire of looking down the gulf, as though he expected a ship. If one appeared and passed on, he merely nodded his head, hung up his glass, went on with his work, or sat by the door and talked to himself in low, strange tones. If one appeared and came near, making as if it would enter the bay, a kind of joy possessed him, and if a storm was on, the joy was the greater. No pilot ever ventured to a ship on such rough seas as Gaspard ventured for small profit; yet he reaped reward out of the thing, somehow.



MIDNIGHT CAME AND STILL THEY SAT THREE SILENT."

Behind it all lay his secret. Kenyon, the trader at the Hudson's Bay company's fort could not discover it; the good Father Dorval could not probe it; but there came a man.

It was Pierre, the half-breed adventurer. There was no point in all the wild northland which Pierre had not touched. He loved it as he loved the game of life. He never said so, but he never said so of the game of life, and he played it with a deep, subterranean joy. He had his way with the musk-ox in the Arctic circle; with the white bear at the foot of Alaskan hills; with the seal in Baffin's bay; with the puma on the slope of the Pacific; and now, at last, he had come upon the trail of Labrador. Its sternness, its moodiness amused him. He smiled at it, the superior smile of the man who has fingered the very heart-nerves of men and things. As a traveller, wandering through a prison, looks upon its grim cells and dungeons with the eye of unembarrassed freedom, knowing that its gray sternness and the clank of its iron cannot cow him, so Pierre travelled down with a handful of Indians through the hard fastnesses of that country, and, alone at last, came upon the gulf at the bay of Belle Amour.

There was in him some antique touch of refinement and temperament which, in in all his evil days and deeds and moments of shy nobility, could find its way into the minds and hearts of men with whom the world had had an awkward hour. He was a man of little speech, but he had that rare persuasive penetration which unlocked the doors of trouble, despair and tragedy. Men who would never have confessed to a priest, confessed to him. In his fiber was the granite of the Indian nature which looked upon punishment with sardonic satisfaction. But there was also some rare touch of chivalry and hospitableness drawn from the veins of his ancestor-a gentleman of France-who chose a wife from among an Indian people.

In the heart of Labrador he had heard of Gaspard, and had travelled to that point in the compass where he could find him. One day when the sun was fighting hard to make a pathway of light in front of Gaspard's hut, Pierre rounded a corner of the cliff and fronted Gaspard as he sat there, his eyes idling gloomily with the

pitality has not need of many words in new lands, and, when Gaspard and Pierre looked each other in the eyes, they knew that one word between them was as a hundred with other men. The heart knows its confessor, and the confessor knows the shadowed eye that broods upon some furtive, ghostly thing; and when these two are face to face, comes a kind of merciless concision of disclosure and understanding.

"From where away?" said Gaspard, as he handed some tobacco to Pierre.

"From Hudson's bay, down the Grey Dog river, along the Mimatt hills, across the coast country, here."

"Why?" was the concise question; and Gaspard eved Pierre's small kit with curiosity; then suddenly flung up a piercing

Pierre shrugged his shoulders. He had nothing to conceal, but he saw the inquisition of the look and wondered; he knew he had stumbled on a secret.

"Adventure-adventure," hesaid. "The land"-he pointed north, west and east "is all mine. I am the citizen of every village and every camp of the great north."

The old man twisted his head and looked at a spot up the shore of Belle Amour, before he turned to Pierre again, with a strange anxiety, and said: "Where do you go?"

Pierre followed the gaze of the old man to that point in the shore, felt the undercurrent of vague meaning in his voice, guessed what was his cue, and said: "Somewhere, sometime, but now only Belle Amour. It is enough. I have had a long travel, I have found an open door, I will stay-if you please, eh? If you please?"

Gaspard brooded. "It is lonely," he "This day it is all bright, the sun shines, and the little gay waves crinkle to the shore. But, mon Dieu! sometimes it is all black and ugly with storm. The waves come grinding, booming in along the trough of the winds "-he smiled a grim smile, - "break through the mad teeth of the reefs, and split with a roar of hell upon the cliff. And all the time-and all the time"-his voice got low with a kind of devilish joy-" there is a finger-mon Dieu! you should see that sea. They said little to each other. Hos- finger of the devil, stretch up from the

bowels of the earth, waiting, waiting for perhaps a child: no man could carry that something to come out of the storm! And look unless. If a woman has looked at then—and then you can hear a wild laugh you from day to day something of her, come out of the land, come up from the some reflection of her face, passes to sea, come down from the sky : all waiting, waiting for something, for something! No, no, you would not stay here."

His voice during this strange speech had changed from a kind of wild fierceness to a slow, breaking whisper; but at the last raised again in a kind of almost

angry entreaty.

Pierre felt his way still a little nearer through the vague metaphors of the old man's speech, to the thing itself. He could not understand about that grisly finger pointing up from the bowels of the world; but he knew that it had some direct practical meaning; and he waited.

shore towards which Gaspard's eyes had then, and the hard sharp rocks tumbling were harsh with an insolent harshness. Day perched garishly there. Yet, now and then, the staring light was broken by sudden and deep shadows-great fissures in the rocks, and lanes between. These all at once gave Pierre a sugges- there was a thing: what was it? tion, though why he could not say. He knew that when men live lives of pa- then his eyes drew into the bay and staved tient, gloomy watchfulness, they gen- there, seeing mechanically as a hundred erally have something to watch and fancies went through his mind. At last guard. Why should Gaspard remain he gave a start. There were the reefs sociation was not cause enough - memory without purpose does not give men a some purpose in remaining here—his per- be a finger of rock—waiting as the old sistency was more powerful than fantas- man said-for what? His occupation was nominally a man had about him one day a woman, pitying. The counting-house, the bro-

yours and stays there; and if a child has held your hand long or hung about your knees, it gives you a wary kind of gentleness as you step about your home.

As Gaspard rose and moved about to get their simple meal, Pierre, whose life had been spent with men and adventure, who had learned to look for great knowledge behind little signs, guessed that the pilot had one time talked across the fire to a good comrade, who, maybe, cradled

a child at her breasts.

He knew that a man will cherish a deep, eternal purpose, a memory of a woman or a child, when, no matter how terrible his He looked again to that point in the cue to remember, where a man is concerned, he will yield it up to time. Then been cast. The sun was shining full just to this he had come, thinking of Gaspard. There was a woman, maybe a child once; awkwardly back into the waste behind, there was some sorrowful mystery about them; there was that point in the shore that held the old man's eyes strangely; there was the bay with that fantastic "finger of the devil" stretching up from the bowels of the world. Behind that symbol

Long time he looked out upon the gulf, here year after year? He knew that as- of which the old man spoke. He could guess from the color and movement of the water where they were. The finger of the painful Titanic weirdness. Gaspard had devil?-was it not real too? Might it not

He smiled. He had his cue. He could pilot in a bay rarely touched by vessels, not guess the mystery, but it should be and then only for shelter. A pilot need his task to sound it to the deepest. He not take his daily life with such brooding fell into a reverie. He was thinking how seriousness. It was not anxiety, for the men in lonely new lands whose duties of man was deliberate, careful and concen- life are limited, and large and adventurtrative in speech, even to painful precis- ous, concentrate themselves upon the few ion and suggestion. He gave the impres- great emotions they feel; how they are sion of bigness, though he was small in concerned with the few real questions stature: it was the distinguished look of of existence; to be fed and clothed; to his eyes-distant, incomprehensible, cour-satisfy their feelings-which ever have ageous. In body he was like flexible a kind of crude grandeur in a country metal, all cord and muscle. Yet, as Pierre crude and grand. He had seen these studied him, he saw something so simple feelings transmuted from happiness into and forlorn in him that he guessed the despair, and then vengeance-terrible, un-



"THAT NIGHT MY WIFE AND CHILD DIED IN THE SNOW."

ker's corner, the constant miserable salaams before the straw gods of the cities, steal away the strength of a man's soul, and he eats the leek and wears Punchinello's rags, when all his life he should be out hewing destiny from his joy or misery, openly, hugely.

"See," said Pierre, aloud as he thought,
"the man of the plains eats a loaf and
lives, the other fills with wine and foolish
food and dies away—a memory. Bien,
here, I think, is a great man. He has
something to do. I know the look of his
eye. Well, we shall see!"

At this the old man touched him on the shoulder. He rose and went with him into the gloomy cabin. They ate and drank in silence. Pierre was waiting. When the meal was finished they sat smoking till night fell about them. Then the old man lit a fire, and drew to the door. For, though it was only late summer, it was cold in the shade of the cliff. Long time they sat. Now and again Pierre saw the old man cast upon him a quick, furtive glance. Once he took his pipe from his mouth, and leaned his hands on his knees as if about to speak. But he did not.

But Pierre saw that the time was right. So he said, as though he knew something: "It is a long time since it happened?"

Gaspard, brooding, said: "Yes, a long time—too long!" Then, as if suddenly awakened to the strangeness of the question, he added, in a startled way: "What

do you know? Tell me quick-what do you know?"

"I know nothing, except what comes to me here, pilot,"—he touched his forehead—"but there is a thing—I am not sure what. There was a woman—perhaps a child; there is something on the shore; there is a hidden point of rock in the bay; and you are waiting for a ship—for the ship—and it does not come. Is that so?"

Gaspard got to his feet, and peered into Pierre's immobile face. Their eyes met—the look of both deep, inscrutable.

"Mon Dieu," said the pilot, his hand catching the smoke away from between them, "you are a great man; you have a wonderful mind. You are cold like ice, and still there is in you a look like fire."

"Sit down," answered Pierre, quietly, "and tell me all. Perhaps I could think it out, little by little; but it might take too long—and what is the good?"

Slowly Gaspard sat down. Both hands rested on his knees, and he stared into the fire. Pierre touched his hand with the tobacco-bag. The hand lifted, took the tobacco, and then Gaspard's eyes came keenly to Pierre's. He was about to speak.

"Fill your pipe first," said Pierre, coolly.

The old man did so, abstractedly. When the pipe was lighted, Pierre said, "Now!"

"I have never told the story," said the old man; "never—not even to Père Dor-

put a finger to his forehead, as had Pierre, "that you will be silent . . .

"She was a fine woman to see: her eyes were black as burning beads; and when she laughed, it was all music. I was so happy. We lived on the island of the Aux Coudres, far up there at Quebec. It was a wild place. There were smugglers and others there-maybe a pirate or two; but she was like a saint of God among all. I was a lucky man. I was a pilot, and took ships out to sea, and brought them in safe up the gulf. It is not all easy, for there are mad places on the river. Once or twice, when a wild storm was on, I could not land at Cap Martin, and was carried out to sea and over to France . . . Well, that was not so bad; there was plenty to eat and drink, and nothing to do. But when I marry, it was different. I was afraid of being carried away and leaving my wife-the good Mamettealone long time. You see, I was young, and she was ver' beautiful"

He paused, and caught his hand over his mouth, as though to stop a cry; the lines of his face deepened. Presently, he puffed his pipe so hard that the smoke and the sparks hid him in a cloud; and he spoke through it. "When the child was born-mon Dieu! Have you ever felt the hand of your own child in yours, and looked at the mother, as she lies there, all pale and shining, between the quilts?"

He paused. Pierre's face ran to a strange, cold impassiveness, but his eyes

dropped to the floor.

Gaspard continued: "Well, it is a great thing, and the baby was born quick one day when we were all alone. A thing like that gives you wonder. Then, I could not bear to go away with the ships, and at last I said: 'One month, and then the ice fills the gulf, and there will be no more ships for the winter. That will be the last for me. I will be pilot no morelaugh ran over her little white teeth. Mon Dieu, I stop that laugh pretty quick on the lips!"

He seemed for an instant to forget his great trouble, whatever it was, and his face went to warm light, like a boy's; but it was sun playing on a scarred fortress. His eyes fondled the fire, the joy of the

val. But I know, I have it here" - he the light faded out of his face, and left it like iron smouldering from the bellows.

"Well," he said, "you see there was a ship to go almost the last of the season, and I said to my wife: ' Mamette, it is the last time I shall be a pilot. You must come with me, and bring the child, and they will put us off at Farther Point, and then we will come back slow to the village on the good St. Anne and live there ver' quiet.' When I said that to her, she laugh back at me, and say, 'Beau! beau!' and she run her face down to the child's. and laugh in the child's eyes, and speak -O, mon Dieu, she speak so gentle and so light!-and say to the child, 'Would you like to go with your father, the pilot, a pretty journey down the gulf?' And the little child laugh back at her, and shake its soft brown hair all over its head -oh, it was a fine sight! They were both so glad to go. I went to the captain of the ship; I say to him: 'I will take my wife and my little child, and when we come to Farther Point, we will all go ashore.' Well, the captain laughed big. and it was all right; it was all right. O, mon Dieu! that was long time ago—that was long time ago."

He paused again, and threw his head back, with a toss of despair; and then his chin dropped on his breast, his hands clasped between his knees, and his pipe, which he had laid beside him on the

bench, was forgotten.

Pierre did not disturb him, at first. He knew that there were times when a man's soul withdraws itself infinitely from the world, and broods alone in the strange closet of despair, whose walls are sound-

less and without light.

Quietly, Pierre put some wood upon the fire, opened his kit, and drew from it a little flask of rum. Then, looking round, he found two tin-cups, poured some rum into them, and came and sat down. Presently, he reached over and put a cup upon no.' She was ver' happy then, and a the bench beside the pipe. Then he smoked on. A long time passed. At last, Gaspard roused himself with a long sigh, turned, and picked up the pipe; but, seeing the cup of rum, he lifted it, and took one long swallow, before he began to fill and light his pipe. Now there seemed to come into his voice, as he spoke, something of iron hardness; he thought lasting for a moment; and then had drawn, as it were, away from that man faces hard duty and the dry, petrify- away back to the great gulf. ing air of relentlessness. His words dropped with a deadly precision now:

travelled down the gulf, a great storm That was came on, out of the north. We thought it would nothing much. pass; but it stayed on. And then, when we got to the last place where the pilot could land, the waves were running like hills to the shore, and no boat could live a strong man and a great swimmer. But where few are safe?' I tell him yes. into the ocean with us. Well, we laugh will go to the bay of Belle Amour.' a little, and think what a great brain I had when I said to my wife, 'Come and bring the child for the last journey of Gaspard, the pilot.' For, you see, there we were on board the ship, evsailors, oh, they were ver' jolie, and to see them take my little child, my Babette, and play with her, as she rolled in woollens on the deck-ici! it was grand. So I said to my wife, 'This will be a gran' voyage for all of us.' But a woman, she has not the mind like a man. When a man laugh in the sun and think nothing of evil, a woman laugh, too; but there comes, there comes a little, quick sob to her lips. You ask her why, and she cannot tell. She knows that something will happen; she knows that something will go wrong. A man has great idée; a woman has great sight. The eye of a woman is more than a man's mind. So, my wife, when I laugh, she turn her face away from me. She was right she was right

"Now one day out in the ocean we pass a ship—only two days out in the ocean. The ship signalled us. I say to my wife, 'Ha, ha! now we can go back, maybe, to the belle St. Anne.' Well, the ships come close together, and the captain of the other ship he have something important with our captain. Then he ask if there will be any chance of pilot into the and call to me. I go up, I bring my wife them round some casks in a great hole,

soft atmosphere of home and hope, and and my little Babette: and that was gone out into that lonely climate where how we get upon the other ship and sail

"When my wife stepped on board that ship, I see her face grow pale, and some-"Well, we went into the boat. As we thing strange come into her eyes. I ask her why; she do not know: but she hugged Babette close to her breast. She was right. It was a long, low, black ship. It could run through every sea. Soon the captain come to me and say, 'You know the coast, the north coast of the gulf, from Labrador to Quebec?' I tell between the ship and the Point. For my- him yes, 'Well,' he say, 'do you know self. I would not have been afraid; I am of a danger bay where few ships enter, when a man has a wife and child, it is told him of the bay of Belle Amour. Then different quite. So the ship went out he say ver' quick, 'That is the place; we was ver' kind to my face; he gave my wife and child good berth, plenty to eat and drink, and once more I laugh. But my wife-there was in her face something I not understand. It is not easy to unerything ver' good, plenty to eat, much derstand a woman. We got to the bay; I to drink, to smoke all the time. The had ver' great pride, I was young, I was the best pilot in the St. Lawrence, and I took in the ship between the reefs of the bay, where they run like a great gridiron under water, and I laugh when I swing the ship pretty quick to the right, after we pass the reefs, and make a curve round something. The captain pull, ask me why, But I never tell him that. I do not know why I never tell him. But the good God put the thought into my head, and I kept it from that hour to this; and it never leave me-never, never!'

He slowly rubbed his hands up and down his knees, took another sip of rum. and went on: "I brought the ship close up to the shore, and we went to anchor. All that night there was light of a fire on the shore, and I knew there was something strange. So I slid down the side of the ship and swam to the shore. There, under a little archway of rocks, it was going on. I could not tell, but I knew that they were burying things. Then, all at once, it come to me quickthis was a pirate ship! I came closer and closer, and then I see a dreadful thingthere was the captain and the mate and another. They turned quick upon two gulf, because it is first time that he ever other men, two sailors, and killed them; visit Quebec. The captain swing round then they took the two bodies and wound



"HE NEVER SEEMED TO TIRE OF LOOKING DOWN THE GULF,"

and covered it all up. I understood. It is the old legend that a dead body will keep gold all to itself so that no one shall find it. Mon Dieu!"-his voice dropped low and shook in his throat-"I gave one little cry at the sight, and then they saw me! They were three-I was only one. They were armed; they sprang upon me and tied me, then they laid me beside the fire, and covered up the hole with the gold and the bodies.

"When that was done they take me back to the ship, then with pistols at my head, they make me pilot the ship out into the bay again. And as we went they make a chart of the place. We travel along the coast for one day; and then a great storm of snow came, and the captain say to me, 'Take us into a harbor.' I took them into a harbor. Then," — here his voice grew almost terrible in its stifled force, -" when we were at anchor, they take me and my wife and my little child, and put us on shore, alone, with the storm and the bare rocks and the dreadful night, tell the secret of the gold!" A by one, by the hand of a gorgon, while

sob rattled in his throat, but he went on. "That night my wife and my child died in the snow." Here his voice got incredibly deep and slow: "After a long time I worked my way to an Injun camp. For months I was like a child, all my flesh gone, only bones and sorrow and hate. When the spring come, I went and dug a deeper grave for my wife and child, and left them there, where they had died. But I come to the bay of Belle Amour; because I knew that some day that man with the devil's heart would come back for his gold; and then would come my time-the hour of God."

He paused. Then after a moment, he said again. "The hour of God! I have waited

twenty years; but he has not come. Yet I know that he will come." Here his voice took on a low furious certainty. "I feel it here,"-he tapped his forehead-"I know it here" - he tapped his heart. "Once where my heart was, there is only one thing, and it is hate. I know, I know, that he will come. And when he comes," he raised his arm high above his head, laughed a wild, weird laugh; suddenly paused, let the hand drop, and fell to staring into the fire.

Pierre poured out some more rum, and put the cup in his fingers. But Gaspard put the rum down, caught his arms together across his breast, and never turned his face from the fire. He had withdrawn again into that strange region where a man's soul gets terribly lonely, as it sees the shadows of his past, flicking in and out of the darkness. Midnight came, and still they sat there silent. There was no man, in all the world, with a greater gift in waiting than Pierre. Many a time his life had been a swivel upon which the comedies and tragedies of others had turned. Fate seemed to hang at his heel. His adventurous footsteps sauntered ever in the purlieus of destiny. He neither loved nor feared men; sometimes he pitied them. He pitied Gaspard. He knew what it was to and leave us there, that we should never have the heart-strings stretched out, one

He knew there was a Justice above justice -that primal law which gave an eye for an eye, and whatever supplementary agony individual genius might devise; for he knew well, that, in the terrible wrongs which some men suffer, a life for a life is not enough. Years upon years had this man waited. Then, into some incredibly agonizing hour must all his suffering be thrust, to clothe his enemy about with a robe of torture such as Medea gave unto her victim.

Not till the darkest hour of the morning did the two break their silent watch and go to bed. The sun had crept stealthily to the door of the hut before they rose again. Pierre went to Gaspard, as they stepped into the morning, laid his hand upon his shoulder, and said: "My friend, I understand. Your secret is safe with me; you shall take me to the place where the gold is buried, but it shall wait there until the time is ripe. What is gold to me? Nothing. To find gold-that is the trick of any fool. To win it or to earn it -that is the only game. Let the bodies rot about the gold, as men have rotted about it since the world began. You and I will wait. I have many friends in the Northland; but there is no face in any tent-door looking for me. You are alone; well, I will stay with you. Who can tell? Perhaps it is near at hand—the hour of

The hard, huge hand of Gaspard swallowed the small hand of Pierre, and then, in a voice scarcely above a whisper, he answered: "You shall be my comrade; I have told you all, as I have never told it to my God. I do not fear you about the gold—it is all cursed. You are not like other men; I will trust you. Sometime you also have had-the throat of a man in your fingers, and watched the life spring out of his eyes, and leave them all black. When men feel like that, what is gold-what is anything? There is food plenty in the bay and on the hills. We will live together, you and I. Come, and I will show you the place of hell."

Together they journeyed quietly down the crag and along the beach, to the place where the gold, the grim god of this world, was fortressed and bastioned by its vic-

The days went on. The weeks and Behind Gaspard's wrongs there was a

the feet were chained to the rocking world. months ambled by. Still the two lived together. Little speech passed between them, save that piercing speech of comrades who use more the cipher than the tongue. The longer Pierre staid, the more the fiber of those lonely rocks crept into his veins, where all, before, had been fiber. It seemed to him, after a time, that Gaspard's wrongs were almost his own. Yet, with this difference: he knew that he must stand by, and let the avenger be the executioner—himself the spectator merely.

Sometimes he went inland and brought back moose, caribou and the skins of other animals, thus assisting Gaspard in his dealings with the Hudson's Bay company. But, again, there were days when he did nothing but lie on the skins at the hut's door, or saunter in the shadows and sunlight along the bay of Belle Amour. Not since he had come to Gaspard had a ship passed the bay or sought to anchor in it.

But there came a day. It was the early summer. The snow had shrunk away from the ardent sun and swilled away to the gulf, leaving the tender grass showing. The moss on the great rocks had changed from brown to green, and the vagrant birds had fluttered up from the south to this austere but pleasant plateau. The winter's furs had been carried away in the early spring to the Hudson's Bay company's post, by a detachment of couriers des bois. There was little left to do. This morning, they sat in the sun, looking out upon the gulf, their thoughts drifting vaguely in the atmosphere of memory, which is the way of men who have no ambition in life and whose present is imposed upon by their past. Presently, for some purpose, Gaspard rose and went into the hut. He remained some time. Pierre's eves still idly scanned the gulf. As he looked he saw a vessel rounding a point a distance down the gulf. It flashed into his mind: suppose this was the craft of the pirate and murderer? The speculation pleased him. His eyes drew away from the indistinct craft, first to the reefs, and then to that spot in the bay where the colossal needle stretched up at a terrifying angle - waiting. He knew how small a thing life was beside the great elementary principles at the base of life.

ation, from which it had been hammered and been pushed off into the world.

It was as Pierre speculated. Brigond, the French pirate, who had hidden his gold at such shameless cost, was, after twenty years' imprisonment in the galleys at Toulon, come back to find his treasure. He had little doubted that he would find it. The lonely spot, the superstition concerning dead bodies, supposed doom of Gaspard, all ran in his favor. His little ship came on, manned by as vile a crew as ever mutinied or sunk a craft.

When the ship got to within a short distance of the bay, Pierre got up and called to Gaspard. Gaspard came to the door.

"There's work to do, pilot," he said. Gaspard felt the thrill of his voice, and flashed a look out to the gulf. He raised his hands with a sudden gasp of terrible joy. "I feel it!" he said, "It is the hour of God!"

He started to the rope-ladder of the cliff, then wheeled suddenly, and came recognized him as the pilot Gaspard of

he said. "Stay here and watch; you shall see great things." His voice had a round deep tone He caught both Pierre's hands in his and added: "It his for my wife and child: I have no fearno fear. Adieu, mon ami! When you see the good Père Dorval say to him-but no, it is no matter,-there is One greater!"

Once again he caught Pierre hard by the shoulder, then ran to the cliff and swung down the ladder. All at once there ran up through Pierr 's body a hot impulse, and his eyes went misty. He sprang towards the cliff. "Gaspard, come back!" he called, then paused, and, enigmatically smiling, threw up his hands, with an air of helplessness. He drew back and waited.

The vessel was hove to outside the bay, as if hesitating to come in. Brigond, the pirate, was considering whether it was better, with his scant chart, to attempt

principle as antique as the anvils of cre- the bay, or to take small boats and make for the shore. He remembered the reefs. but he did not know of the needle of rock.

Presently, he saw Gaspard's boat making out towards his ship. "Some one who knows the bay," he said; "some one who lives there. I see a hut up on the cliff." Soon Gaspard drew alongside the ship.

"Hello! Who are you?" Brigond called down to him.

"One of the Hudson's Bay company's men," answered Gaspard.

"How many are there of you?" questioned Brigond.

"Only myself, alone," was the reply.

"Can you pilot us in?"

"I know the way." " Come up."

Gaspard climbed up; his boat trailed alongside the ship.

He remembered Brigond, and he veiled his eyes, lest the incredible hate he felt should reveal him. No one could have back to Pierre. "You must not come," twenty years before. Then his face was



" HE LIFTED HIM AND DASHED HIM TO THE DECK '

cheerful and bright, and in his eye was the fire of youth. Now a thick beard and furrowing lines hid all the look of the past. His voice, too, was desolate and distant.

Brigond clapped him on the shoulder. "How long have you lived off there?" he asked, as he jerked his finger toward the shore.

" A good many years."

"Did anything strange ever happen there?"

Gaspard felt his heart contract again, as it did when Brigond's hand touched his shoulder.

"Nothing strange is known to have happened there," he said.

A vicious joy came into Brigond's face. His fingers opened and shut. "Safe, by the holy heaven!" he said.

"By the holy heaven!" repeated Gaspard, under his breath.

They walked forward. Almost as they did so, there came a big puff of wind across the bay, one of those sudden currents that run in from the ocean and the gulf stream. Gaspard saw and smiled. In a moment, the vessel's nose was towards the bay, and she sailed in, dipping a shoulder to the sudden foam. On she came, past reef and bar, a very pretty tumbrel to the slaughter-place. The spray feathered up to her sails; the sun caught her on deck and beam. She was running dead for the needle of rock.

Brigond stood at Gaspard's side. All at once, Gaspard made the sacred gesture, and said, in a low tone, as if only to himself: "Pardon, mon capitaine, mon Jésu!" Then he turned upon Brigond a grim, dreadful look.

The pirate started. "What's the matter?" he said.

Not Gaspard, but the needle-rock re-

plied. There was a sudden shock; the vessel stood still and shivered horribly, lurched, swung shoulder downward, then reeled, shivered again, and struggled. Instantly she began to sink.

"The boats! Lower the boats!" cried Brigond. "This cursed fool has run us on a rock!"

The waves, running high now, swept over the deck.

Brigond started aft, but Gaspard stepped before him. "Stay where you are!" he said. "For where you are you die!"

Brigond, wild with terror and rage, ran at him. Gaspard caught him as he came. With incredible strength he lifted him and dashed him to the deck. "Die there," he said, "murderer!"

Brigond crouched upon the deck, looking up at him with fearful eyes. "Who are you? Who are you?" he said.

In Gaspard's eyes there was the terrible joy of justice. "I am Gaspard, the pilot," he said. "I have waited for you twenty years. Up there, in the snow, my wife and child died. Here in this bay you die."

There was noise and racketing behind them; but they two heard nothing. The one was alone with his terror, the other with his soul. Once—twice—thrice the vessel heaved, then went for an instant suddenly still.

Gaspard understood. One look at his victim—then he made the sacred gesture once again, and folded his arms.

Pierre, from the height of the cliff, saw the vessel dip at the bow, and then the waters divided and swallowed it—and ship and crew were gone.

"Gaspard should have lived," he said.
"But—who can tell?—perhaps the woman was waiting for him."





FROM THE STANDPOINT OF THE EMPLOYEE.

BY LUCY M. SALMON.

in periodical literature. religious papers have given mistresses advice concerning their treatment, and the humorous columns of the daily and the illustrated weekly press have caricatured their individual peculiarities. In addition to all this it has been remarked that among employers whenever the conversation begins it sooner or later gravitates towards this one fixed point, while there is reason to believe that among employees the merits and demerits of employers have been not less vigorously canvassed.

This public and private discussion has not been without reason since the personal element occupies so prominent a place in the occupation. But there is another side of the subject that demands consideration. Other relationships besides the personal ones are established when that of master and servant is as-Domestic service whether given or re-

HE subject of domestic servants has Domestic service is an occupation in which, always occupied a prominent place by the last census returns available, more The popular than one million of persons were actively magazine article has proposed many remengaged, to whom employers pay annually edies for their reform, household journals in cash wages, at the lowest rough estiand the home departments of secular and mate \$160,000,000, for whose support they pay at the lowest estimate an equal amount and through whose hands passes a large part of the finished products of other forms of labor. It therefore demands the same serious consideration awarded other occupations in the industrial field, including a discussion of the economic advantages and disadvantages of domestic service as an occupation.

It is true in domestic service, as in other occupations, that many drift into it because it is apparently the only course open to them, but there are certain advantages and disadvantages which a person who is free to choose always weighs before deciding for or against it.

The most obvious advantage is that of high wages. These wages are both absolutely and relatively high. They include not only the actual cash paid, but also freedom from the personal expenses of sumed. The employer becomes a member board, lodging, fuel, light and laundry. of the great class of wage-payers and the The position entails no expenditure for employee joins the ranks of wage-earners. car-fares in going to and from work, no travelling expenses, none in the direcceived, becomes a part of the great labor tion of books and periodicals, attendance question and it must be judged as an oc- at conventions, membership in associcupation by the same tests that are applied ations, or other demands made in a busito every other. The foibles of domestic ness way by other occupations. It inservants and their employers naturally volves no outlay for appliances for work, form a subject of gossip for a passing hour. as a sewing-machine, type-writer, textbooks, etc. More than all this, as long as which domestic servants are drawn, of an public sentiment is willing and anxious to pay three dollars per week and expenses to a girl just landing at Castle Garden and give her all the instruction necessary to do the work, not one dollar of outlay is necessary in learning the principles and details of this work, as is the case in every other occupation involving any qualifications beyond physical strength. The domestic employee, therefore, is never obliged to pay back either the capital invested in preparing for work, or the interest on that amount. Moreover, the factor of time lost is one which does not enter into domestic service, except in a casual way, although an important one in nearly all other wage-earning occupations. It is thus possible for the average and whether married or unmarried, has, household employee, earning three dollars and a quarter per week-an estimate based on the reports made concerning congenial employment to many whose three thousand employees-to save annually nearly one hundred and fifty dollars in an occupation involving no outlay, no investment of capital, and few or no personal expenses.

The wages received are also sometimes relatively higher than those received in other occupations. A comparison made between the wages received by three thousand employees throughout the country and three thousand others in a single large city with the wages received by six thousand teachers in the public schools in sixteen representative cities, shows that the actual earnings of the average cook in a large city are often more than the earnings of the average teacher in the public schools in several of these cities. In comparing, also, the wages received by domestic employees with the average annual earnings of working women in the twenty-two typical cities investigated by the department of labor, it is found that the financial advantage is with the domestic employee.

A second advantage is, that the occupation is conducive to good health, including, as it does, regularity and variety of work, and involving little personal inconvenience or discomfort. In many families, men servants are employed in some capacity, and this means that much of

abundance of well-cooked food and comfortable lodgings.

A third advantage is the fact that it gives at least the externals of a home. This consideration weighs especially with the foreign-born and those who have no homes of their own. These home privileges are often many and great, and, with the single exception of a seat at the table, the domestic employee is as much a member of the family whose external life she shares as is the average boarder in a private family.

A fourth advantage is the knowledge that it gives of household affairs and training in them, knowledge of which every woman, whatever her station in life, at times, most pressing need.

A fifth consideration is, that it offers tastes lie specially in this direction. It is undoubtedly true that many persons in other occupations would honestly prefer to do housework, if some of its present disadvantages could be eliminated.

These advantages which domestic service, as an occupation, has over other employments are patent. They would be recognized by all, whether domestic employees or not, as the accompaniments of the service as it exists under reasonably favorable conditions. They are advantages which, with the exception of special home privileges, are independent of the personal character and disposition of employers. They are apparently inherent in the occupation, as much to be expected as are free Sundays and evenings after six o'clock in mills and factories. They are the inducements which, when a choice has been possible, have led intelligent women to become household employees. They are the advantages that have been repeatedly set forth, by the press and the pulpit, to the sewing-women and shopgirls working at the starvation limit of wages in large cities, to induce them to better their condition. Unquestionably, such women would, in many ways, be far better off than now, if they were in comfortable domestic service. It has been said by the head of one of our great labor the hard work is done by them. There is bureaus, that all questions concerning also the assurance, not always found in women resolve themselves into those of other occupations open to the class from "wages, hours, health and morals;"

and domestic service conforms to all the may be applied, in principle, to every requirements that could be demanded un- branch of the service. The only place der these four heads, with the possible ex-ception of hours, under unfavorable con-is in hotel service. Those women who country girls drift into mills and factories, teachers' agencies are crowded with applicants who can never secure a position -and could not fill it if obtained; there must be something else involved, besides the matter of "wages, hours, health, and morals.'

No one occupation includes all advantages and no disadvantages. There must always be a balancing of the pros and cons, and domestic service has its industrial disadvantages, which are as patent as its advantages and like them are independent of the personal relationship existing between employer and employee.

The question was recently asked of nearly six hundred employees: "What reasons can you give why more women do not choose housework as a regular employment?" The majority gave in reply one or more of these reasons: pride, social condition and unwillingness to be called servants, confinement evenings and Sundays, more independence in other occupations, hours too long, ability to live at home by working in shops, no chance for promotion, together with a large number of miscellaneous reasons. Only thirty-eight of the entire number mentioned as a disadvantage the personal treatment sometimes accorded by mistresses.

Some of these reasons, and also other industrial conditions, demand a more careful study. The first industrial disadvantage is the fact that there is little or no opportunity for promotion in the service, nor are there opening out from it kindred occupations. An ambitious and capable seamstress may become a dressmaker and mistress of a shop; a successful clerk may set up a small fancy-store; the trained nurse may develop into a physician; the teacher may become the head of a school—but there are no openings in household employments. Success means a slight increase in wages, possibly an easier place, or service in a more aristocratic neighborhood, but the differences of kind. "Once a cook, always a cook,"

ditions. But, notwithstanding these ad- would become the most efficient domestics vantages, women in cities prefer sewing, are the ones who see most clearly this present drawback to the occupation.

The second disadvantage is the paradoxical one that it is possible for a capable woman to reach in this employment comparative perfection in a reasonably short time. Table service is a fine art which many waitresses never learn, but it is easily mastered by one who "mixes it with brains." One illustration of this is the superior service given at summer resorts by college students without special training. The proper care of a room is understood by few maids, but the comprehension of a few simple principles enables an intelligent woman soon to become an expert. The work of the cook involves much more; but it does not follow that the art cannot be readily learned, because many persons cook for years without knowing how to provide a single palatable and nourishing dish. This fact, taken in connection with the previous one, unconsciously operates to prevent a large number of ambitious women from becoming domestics.

A third disadvantage is the fact that "housework is never done." In no other occupation, involving the same amount of intelligent work, are the results apparently so literally ephemeral. This indeed, is not the true statement of the case-mistresses are learning slowly that cooking is a moral question; that neatness in caring for a room is a matter of physiology, and that table service has its æsthetic side. But if it has taken long for the most intelligent part of society to understand that the results of housework are not transient, but as far-reaching in their effects as are the products of any other form of labor, it cannot be deemed strange that domestics as a class, and those in other occupations, repeatedly complain: "In housework there's nothing to show for your work."

A fourth disadvantage is the lack of organization in domestic work. In 1880, the superintendent of the census wrote: "The organization of domestic service in are only slight ones of degree, never those the United States is so crude that no distinction whatever can be successfully the service." The verdict of the statistician would doubtless be accepted by most employers. An employee sums up the question from the point of view of her class, when she says: "Most women like to follow one particular branch of industry, such as cooking, or chamber work, or laundry work, because it enables one to be thorough and experienced; but when these are combined, as a general thing, the work is hard and never done."

A fifth disadvantage is the irregularity of working-hours. This is a most serious one, since the question is complicated, not only by the irregularity that exists in every family, but also by the varying conditions in different families. The actual working hours of a general servant may vary from one instance of five hours to another of eighteen hours. They sometimes vary in the same city from seven to

seventeen hours.

Many of these differences are innate in the composition of the family, and can never be removed; many of them are accidental, and their number could be lessened; many of them grow out of necessarily different standards of living. This is seen where one family of ten employs one general servant, and another family of ten employs eleven servants; one family of four employs nine servants, while seventy-eight other families of the same size each employ one servant; one family of eight has sixteen servants, while each of eight families consisting of eight persons employs one servant; twenty-three families number seven each and have one general servant, while another family of seven has thirteen employees; in another instance, three employees serve a family These contrasts could be multiof one plied indefinitely. They simply indicate, in one way, the helpless confusion that must exist at present in the matter of hours of service required. To a young woman seeking employment, the question of working-hours assumes the aspect of a lottery-she may draw a prize of seven working-hours, or she may draw a blank of fourteen working-hours; she cannot be blamed for making definite inquiries of a prospective employer, regarding the size of the family and the number of servants employed.

The irregularities in even a well-regu-

maintained between the different parts of lated family are almost as great. Many of these are apparently necessary and the employee must expect to meet them; they are often not so great as those that perplex the mistress of the house in her share of the household duties, but the fact cannot be ignored that they exist and have weight. The one afternoon each week with generally one or more evenings after work is done are not sufficient compensation. "You are mistress of no time of your own," says one employee, "other occupations have well defined hours after which she can do as she pleases without asking anyone.'

> A sixth disadvantage closely connected with the preceding is the matter of free time evenings and Sundays. No objection to housework is more often made than this. It is an objection that can never be wholly obviated since the household machinery cannot stop at six o'clock and must be kept in order seven days in the week, but were society so inclined the

objection could be lessened.

A seventh difficulty is presented to the American-born girl when she realizes that she must come into competition with the foreign-born and colored element. Although this feeling of opposition is undoubtedly unreasonable, it is not peculiar to domestic service. The fact must be accepted, with or without excuse for it.

Another disadvantage that weighs with many is the feeling that in other occupations there is more personal independence. This includes not only the matter of time evenings and Sundays which they can seldom call unconditionally their own, but there is a dislike of interference on the part of the employer either with their work or with their personal habits and tastes. Housekeepers often do not realize how difficult it is for one person to work in the harness of another and by insisting on having work done in their own way, even by experienced servants, sometimes unconsciously hinder the accomplishment of their ends.

There is also connected with this desire for personal independence the preference of serving a company or a corporation rather than a private individual. is hard to explain this feeling except on general grounds of prejudice, but the belief undoubtedly exists that there is more personal independence connected with

of servants.

These may perhaps be considered the principal industrial disadvantages of the occupation. But there are others that have weight and, like the industrial conditions are independent of the personal most important is the social position as yet entailed by this employment. This The most shows itself in various ways. noticeable is the lack of home privileges. It is true that the domestic employee receives board, lodging, protection and many incidental privileges in the home of her employer, that these are, as a rule, better than she could provide for herself elsewhere and much superior to what can be secured by women working in shops and factories. But board and lodging do not constitute a home, and the domestic can never be a part of the family whose external home life she shares. The case is well stated by an employee who writes: " Ladies wonder how their girls can complain of loneliness in a house full of people, but oh! it is the worst kind of loneliness; their share is but the work of the house, they do not share in the pleasures and delights of a home. One must remember that there is a difference between a house, a place of shelter, and a home, a place where all your affections are centered. Real love exists between my employer and myself, yet at times I grow almost desperate from the sense of being cut off from those pleasures to which I had always been accustomed. I belong to the same church as my employer yet have no share in the social life of the church."

This appreciation of the difference between being in a family and being a part of it is in direct ratio to the delicacy and sensitiveness of organization of the employee. An American girl who can be considered one of the family is the very one who most appreciates the difference between being one of the family and like one of the family. The differences most keenly felt are three. The first is the fact that a certain amount of regulation must always be exercised by the employer in regard to the number and character of

work in a large establishment than in visitors received by the employee. It is serving an individual. There is often a a matter of self-protection and is somesimilar feeling of independence in work- times due to the employee as well. It ing in families employing a large number often does not differ in kind or in degree from the care exercised for the other members of the household. The necessity for it is recognized by the better class of employees. Nevertheless, the restraint is irksome, the desire for independence not always unreasonable, and relations of employer and employee. The the wish for a place in which to receive visitors freely not surprising. Another deprivation is the lack of opportunity for receiving or showing even in a slight degree that hospitality which can be accepted in every other employment involving equal intelligence. The domestic employee can neither accept nor give an invitation to supper, she cannot offer a cup of tea to a caller, she cannot ask a friend to remain to dinner, except perhaps at rare intervals, a mother or a sister. She has the privilege of using without limit for her own necessities the food purchased by her employer, but cannot share it without transgressing these privileges. Moreover, she is never a sharer in the general social life of the community. One illustration of this social barrier was found in a manufacturing city of thirty thousand inhabitants. The factory employees, all men and skilled workmen, arranged one winter a series of evening entertainments. Invitations were sent to the self-supporting women in the city, the list including dressmakers, milliners, stenographers, saleswomen and others, but the social line The domestic emwas drawn at cooks. ployee is precluded not by her character. but by her condition from exercising and enjoying those social instincts which are found in all persons. It is from the class of competent, intelligent women that domestic employees are most sought, yet they are the ones who feel most keenly the social disabilities of the occupation.

> Another social barrier is the failure of society to recognize the need on the part of the domestic employee for those opportunities for personal improvement so freely accorded in other occupations. If she has a taste for music or art she can cultivate it only at the expense of ridicule. This is illustrated by the recent experience of a lady who was about to complete the engagement of a cook, a German girl, when the head of the employment bureau

wishes to take violin lessons, her practising might annoy you." The incident was narrated to a company of friends and created much amusement, until one said, "This shows how unregenerate we are; why should she not take violin lessons?" It is not easy to find an answer. The need of the employee of intellectual advantages is not recognized and this lack is also sometimes painfully felt. Moreover, if the domestic is refined and cultivated she must often associate with those who are not.

But the question of social standing goes farther than this. Not only are social advantages of every kind denied the domestic employee, but the badge of social inferiority is put on her in characters as enduring as are the spots of the leopard. This badge assumes several different forms. The first is the use of the word servant. We may prove from etymology that every person who confers a favor on another is his servant. We may present a lawyer's brief showing to the satisfaction of every local and national court that every employee in the eye of the law is a servant. We may argue from a biblical standpoint and without a flaw in our chain of reasoning show that we are all servants of each other and that there should be no hesitation in bearing a designation that the disciples felt themselves We may point to honored in wearing. classifications made by the national census bureau and show that clergymen, doctors, lawyers, teachers and domestic servants are placed together. We may quote to every employee the proudly humble motto of the Prince of Wales, "Ich Dien," or the words of the pope who calls himself "the servant of the servants of the Lord." We may, by a social fiction, subscribe ourselves a score of times each day, "Your most humble and obedient servant." We may do all of these things, but just as long as common phraseology restricts the ordinary use of the word to those persons engaged in domestic employments for which they receive a fixed compensation, just so long deference to parents is never expected. will arguments prove of no avail and the

said, "I fear, after all, that A. B. will not "maid" or "working housekeeper," suit you. You live in a flat and as she have as yet, in many quarters, excited little more than ridicule.

> A third badge of the position sometimes insisted on is the cap and apron. These are not worn as are the cap and sleeves of the trained nurse to indicate completion of a regular course of scientific training; they are not the uniform of the postman or policeman which show the recognition by national or municipal authorities of superior fitness for the position filled, and carry with them somewhat of the prestige of the power their wearers serve; they represent no attainment on the part of the person wearing them, nor are they as worn, the object of a laudable ambition. The cap and apron sometimes indicate the rise of the employer in the social scale rather than the professional advancement of the employee. The wider the separation in any community between employer and employee, the greater the tendency to insist on cap and apron.

> A fourth badge is the fact that domestic servants are made not only to feel but to acknowledge their social inferiority. Not only deference but servility of manner is demanded as of no other class and this in an age when social and family relationships are everywhere becoming more democratic, when reverence and respect for authority are sometimes considered oldfashioned virtues, and when even undue freedom of speech and manner are permitted to other classes. The domestic employee receives and gives no word or look of recognition on the street except from those of her own class, she is not introduced to the guests of the house whom she may faithfully serve during a prolonged visit, the common daily courtesies exchanged between the members of the household are not always shown her, she takes no part in the general conversation going on about her, she speaks only when addressed, obeys without murmur orders which her judgment tells her are absurd, "is not expected to smile under any circumstances," and ministers without protest to the whims and obeys implicitly the commands of children from whom

A fifth mark of social inferiority is the word servant continue to be a mark of fact that domestic employees, especially social degradation. The efforts of domesthose connected with boarding-houses, tic employees to substitute the terms restaurants and hotels, are generally given

no self-respecting man or woman in any other occupation who is not insulted by the offer of a fee. The person who through mistake offers a fee to a person belonging to his own station brings upon himself only ridicule and embarrassment. The shop-girl who works for five dollars a week spends half an hour in vain attempt to match for a customer a bit of ribbon, lace or worsted, but she would be justly indignant, as would her employer, if a fee were offered her. In hotels and restaurants, the larger the establishment, and the more the price for every article should warrant exemption from such outside dues, the greater is felt to be the pressure for their payment. Nowhere else is the democratic principle "first come, first served" so flagrantly violated and nowhereelse would its violation be tolerated. The practise puts a price on that kindness and consideration which ought to be the "royal bounty" in connection with every paid service, it destroys genuine sympathy and unselfishness, it creates an eye service and introduces into every branch of domestic service an element of demoralization and degradation that is incalculable. Every person has a contempt for another who accepts a fee and the reproach extends from the individual to every branch of the occupation he represents. No other thing has done more to degrade domestic service in the eyes of the public than this most pernicious custom, and any person who fees a domestic employee has by that act done something to change what should be an honorable employment into a menial service.

It is the social position, with its accompanying marks of inferiority, that, more than any other one thing, turns the scale against domestic service as an occupation in the eye of many intelligent and ambitious women whose tastes naturally incline them to domestic employment. Professor Arthur T. Hadley has well said, in a discussion of comparative wages: "One thing, which counts for more and costs more than anything else, is social standa cash girl on three dollars a week, which

a fee for every service rendered. There is edly, it is, and while this is true the number of women in domestic service will not increase.

> Other objections to domestic service are sometimes made. Some of them arise from misconceptions, others are trivial and do not deserve consideration, while others are individual rather than general. These are the disadvantages that tell most strongly against the occupation. do not include the elements of ill-treatment by mistresses, or their lack of consideration; the fact that there is sometimes much in the tone and manner of an employer that is most irritating to a selfrespecting person; that there are, occasionally, employers who feel that they rise in the social scale in the same proportion as they make others sensible of inferiority or dependence: that many mistresses demand more than can be performed; that some employers are unreasonable, others disagreeable, and still others petulant and fault-finding. These conditions are found, but they are not peculiar to domestic service; the disadvantages discussed are all independent of good or bad personal treatment—they may be modified by the character of the family to whom service is rendered, but cannot be removed by any individual employer, however much he has at heart the interests of his employee, or of domestic employees as a class.

In comparing the advantages and disadvantages of domestic service as an occupation, it will be obvious that the advantages are numerous, substantial and easily recognized; the disadvantages are many, but they are far more subtle, intangible and far-reaching. The advantages are those which the economic woman always sees, and which take her from unhealthy tenement-houses into country air and sunshine, from overcrowded occupations into one where the demand for workers is and always must be unlimited, from starvation wages to peace and plenty, from long hours of dreary mechanical toil to intelligent work, from failure in an uncongenial occupation to ing." The social standing maintained by success and prosperity in this, from a life whose sufferings and privations, as yet she fears to lose by going into domestic but half-told, have roused the sympathies service, ought not to be vastly superior to of all social reformers, to a life of freedom what is within reach of intelligent cooks from the sweater, the floor-walker, the ofearning ten dollars a week; yet, undoubt- ficious and vulgar superintendent, the industrial Shylocks of every occupation a life of comparative ease and comfort.

But while the economic woman, like the economic man, always sees these things, the woman, as she is, looks at another side. She does not understand why work that society calls the most honorable a woman can do when done in her own home, without remuneration, becomes discreditable when done in the house of another, for a fixed compensation. But she recognizes the fact: she sees that discredit comes not from the work itself, but from the conditions under which it is performed, and she does not willingly place herself in these conditions; she sees that a class-line is always drawn, as in no other occupation; she is willing and glad to pay her life for what seems to her life -excitement, city ways, society of home friends, personal independence which another might call slavery. She does not care for those advantages which another person points out to her; they count as nothing in comparison with the price she must pay for them. Of five hundred and forty employees of whom the question was asked, "Would you give up housework if you could find another occupation

that would pay you as well?" one-half answered, "Yes." Yet the number is very small of those who complain of illtreatment or lack of consideration on the part of the employer. There is, indeed, often much ground for complaint on this score, but it must be seen that other relationships besides personal ones are entered into when the relation of employer and employee is established. That which decides the question is not always economic advantage, not always the personal treatment, but that subtle thing the woman calls "life." "Wages, hours, health and morals" may all weigh in the scale in favor of domestic service; but "life" outweighs them all. The advantages in domestic service are those which lead many people to urge the occupation for the daughters of others; the disadvantages are those which incline them to choose some other employment for their own. One conclusion must follow: Any attempt to secure better domestic service must fail of accomplishing its end, if it relies wholly upon personal methods of treatment and does not take into consideration these industrial and social conditions under which service is given and received.



WERE LOVE BUT TRUE.

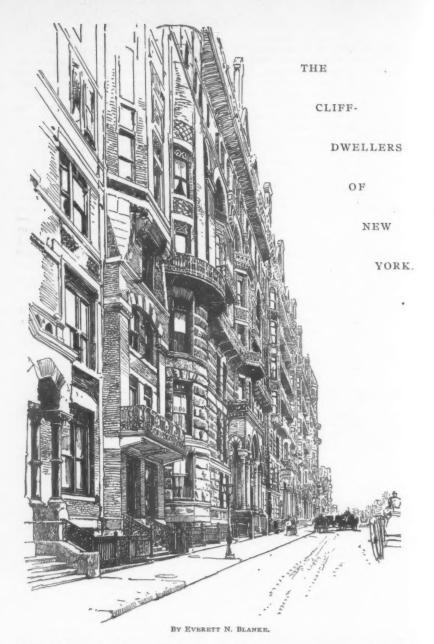
BY KATHARINE LEE BATES.

Were love but true, no frost would mar the flowers, No fatal frost that down the garden bowers Steals hideously from bloom to blissful bloom, The shimmering weft of summer's golden loom, And mocks with blight their radiant, dreamful hours.

Nor would the waste and wreck of orient towers, Slow-sunken from the reach of sun and showers, Tax the unfeatured sands for burial room, Were love but true.

For love is lord of earth's phantasmal powers,
And all that seems with his own fact he dowers.

The shapes of art, the growths of nature's womb,
From love, the one reality, take doom,
And life might laugh at death that overlowers,
Were love but true.



TO Mr. Rutherford Stuyvesant, a descendant of Peter Stuyvesant, the last Dutch director-general of the New Netherlands, New York city is indebted for its first apartment-house. This building is called the Stuyvesant, and is situated in East Eighteenth street, near Third avenue. Although not an imposing struct-

the architectural historian-first, as having been the home of Bayard Taylor, and second, because it was the pioneer in a domestic revolution that is quietly, quickly and permanently extending its influence through all the cities of the United States. Mr. Stuyvesant imported the apartment-house idea from Paris, but its development speedily got beyond his control, and in the hands of men of even more ample means, has inspired the erection of communitive dwelling-houses, such as circumscribe the horizon of Central Park, and are splendid and luxurious to a degree, without parallel in any European city.

The distinction between an apartmenthouse and a tenement-house is somewhat hazy, until the etymology of the two words is considered. "Tenement" is derived from the Latin verb "tenere" (to hold), and is the name properly given to a building that is designed to hold or to give shelter to the largest possible number of persons, at the least possible cost to each individual tenant. "Apartment," however, is an anglicized derivation of another Latin verb, "partere" (to divide), and with equal propriety is applied to a dwelling-house, of which the structural and social intent is to separate family from family, and to gratify the desire for privacy that every household naturally feels, at the same time reducing the expense of that gratification to a low esti-

mate, that is practicable only through cooperation in the fixed charges of domestic management. Economy, therefore, is the purpose of the tenement -comfort, that of the apartment.

The Stuyvesant was built in 1870, and today New York city contains about 700 apartmenthouses, all of subsequent construction, and nearly all of them being equipped with electrical and steam appliances, requiring the outlay of so much capital and attention as are rarely found even in the private dwellings of millionaires.

ure, it has two claims to the attention of First in importance is the passenger elevator, which renders the tenth or fifteenth story of a fire-proof building as desirable for habitation as any story nearer the ground. In Europe, Paris and London not excepted, the steam elevator is uncommon, and as a result the upper stories of an apartment-house not supplied with this substitute for stairways, diminish in rental value as the top of the building is approached. The apartment-house in Paris, therefore, differs from that in New York in the peculiarity of giving shelter to representatives of every grade of society, the weightier and wealthier members of each community, making as it were, the foundation of the social structure, while those of diminishing responsibility and resources climb laboriously toward the roof. The elevator, being democratic, has done much to do away with an aristocracy of wealth in the American apartmenthouse, by performing, unwittingly, for tenants, the duties of a board of equalization, both in the matter of rent and of self-respect.

In the palatial apartment-house the steam heating and electric lighting plants are marvels of thermal and luminiferous invention. They are kept running night and day, the engines and dynamos being placed upon an isolated foundation in the cellars of the building, so that their vibration is not perceptible through the walls and floors. Under these conditions the affliction of a furnace, with its costly





DINING-ROOM IN THE "NEVADA."

certainty of temperament and jealousy with the enforced idleness of the hotelof neglect, is impossible to the modern cliff-dweller. He also takes no thought of strong-smelling and weak-burning gas for illumination, it being necessary only to press a knob and his home is instantly vading light, like that of the sun. His apartments are so scientifically heated by steam that the temperature never varies one degree the whole year around. This result is accomplished by the thermostat, a self-acting appliance that operates in conjunction with a thermometer, and, by expanding or contracting with the most delicate precision, regulates the flow of steam through the pipes. An automatic tion-room and private hall. Her house is

system of ventilation produces within these vast dwelling-places an atmosphere as equable, temperate, pure and dry as that of Florida.

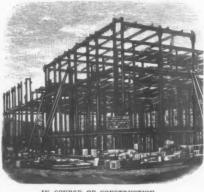
While the great hotels of the metropolis can also claim these characteristics of the apartment-house, there is a domestic difference. The public dining-hall of a hotel is a place for

dress-parades as well as of refreshment. The female servants are likely to be gossips and the male servants dishonest. The children of hotel residents become precocious, wayward and selfassertive, and learn from strangers many things the knowledge of which should be kept from them as long as possible. Extravagance is another easy result of hotellife. The wife tries to dress as richly as the women of longer purse, whom she continually meets, and the husband is exposed to the allurements of the café, the billiard and the card table. Un-

greed for coal, its volcanic generosity with less a woman takes no interest in housesmoke and ashes, its almost feminine un- keeping, she will become discontented guest. She has absolutely nothing to do in the lines of domestic duty, and the hotel-servants are only indirectly under her control.

In apartments, on the other hand, she flooded by a white, steady and all-per- is a queen, as truly as Victoria in Windsor Castle, with this improvement over isolated housekeeping, that all the responsibility for protection, heating, lighting and attendance is assumed by the general management. Only the lighter duties of personal service need to be performed by her maids. The elevator conductors are always on watch at the entrance to her home. She has her own kitchen, recep-

> absolutely safe from fire and robbery. During the summer she locks up her apartments and leaves them undisturbed until she returns in the fall, knowing that there are no rear windows unguarded, no skylight to admit burglars through the roof, and no necessity for the employment of special watchmen. This perfect security

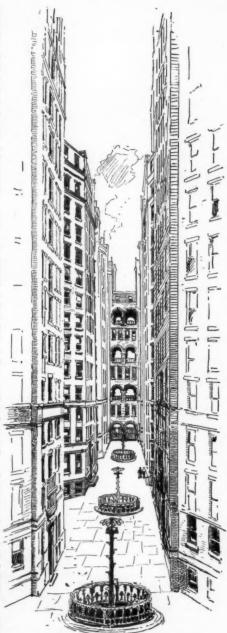


IN COURSE OF CONSTRUCTION

from unwelcome intrusion is a peculiarity of the apartment-house, that has recently acquired increased value in the estimation of men who, on account of their financial or political influence, are being constantly sought after. narrow escape of Mr. Russell Sage from death at the hands of a bomb-thrower has had the immediate and universal effect of increasing the natural shyness of rich men. Mr. Gould, the Vanderbilt and the Rockefeller brothers, and other millionaires, employ special policemen in front of their residences, while Mr. Henry Villard, John W. Mackay, Ir., and other cliff-dwellers, live at an elevation, as safe from invasion as the eyrie of the American eagle.

There is more available floor-space in an ordinary apartment, containing from seven to ten rooms, all on one level, than in a four-story house with a frontage of thirty feet, in which the space taken up by storage and attic room and stairways is wasted. If the resident wants to own his house, he can sometimes purchase his apartment instead of paying rent therefor. This plan prevails in the Knickerbocker, at the corner of Fifth avenue and Twentyeighth street, where Mr. John R. McKesson, Jr., resides. In this building the apartments are of two stories, while in others, such as the Lisbon, Barcelona, Salamanca and Tolosa, on Fifty-eighth street, the height of the ceilings admits of a partial or mezzanine division into two stories. A novel and noteworthy feature of these Spanish-named palaces is the subterranean roadway for the use of delivery wagons. Only private equipages are permitted to halt at any of the eight entrances on Fifty-eighth and Fifty-ninth streets. This roadway is entered through an inclined alley opening into Fifty-eighth street, and passes through vaults lighted from above by circular apertures that pierce the pavement of the great court. These vaults extend from street to street, and are 230 feet wide by 455 feet long. Including the cost of excavation from the solid rock, they represent in themselves an investment of \$950,000.

The era of the apartment-house, which began in 1870, shows no signs of being a transitory one. General Daniel Butter-



THE COURT OF THE "SPANISH" FLATS.



A CORNER IN A MODERN APARTMENT.

field was also one of its pioneers. It is an architectural evolution made practical by electrical and steam appliances, and at the same time offering to the artistic sense of the builder the broadest and boldest opportunity for the display of architectural pride. Sharp distinction must be drawn between such residential quarters and the French flat. To the house-worn husband and wife, fifteen years ago, the French flat was the cradle of domestic liberty. The modern apartment or family hotel is the palace of their dreams. The motival property wears.

ago, houses without stairs, chimneys, sewers, furnaces, gas-meters and a damp cellar-houses fireproof, burglar-proof, curiosity-proof, and, it is no exaggeration to add, earthquake-proof-were visionary castles in Spain, but are realities today, in the Grenada and the Barcelona. The French flat was a failure-architecturally, domestically and morally. Existence in exaggerated pigeon-holes, with the window of your sleeping-room placed directly opposite that of some other family, was demoralizing.

The home-club system was a development of the apartment idea. Several men would subscribe toward the capital required

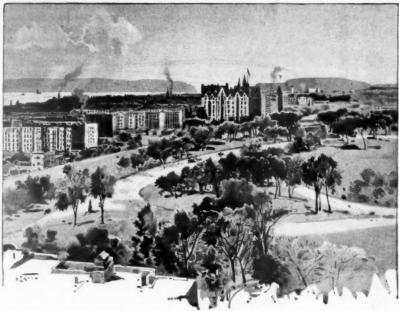
for the construction of a building, in which a suite of rooms would be owned by each member of the club. The Chelsea was built on this plan, the conception being with Mr. Hubert, the architect. The home-club idea was successful, until it met the fate of all cooperative associations, and fell into the hands of speculators. As soon as these clubs lost the power to supervise their membership, the houses they occupied lost caste. More than one family occupied an apartment, and the halls became redolent of the conflicting odors of half-a-dozen kitchens. Not until individual capital found profitable investment in this direction-William Waldorf Astor being the latest investor in the field-did families of abundant means, from the highest plane of American culture, make a trial of home-life, far and away above the dust and din of the streets. The office-building came before the apartment-house, but the idea is the same. The elevator has made both profitable and necessary. Stairs in a twelve-story officebuilding are an untrodden tribute to the weary past, and, like those of the cloudpiercing apartment-house, are likely to be used merely as interior fire escapes.

flat was the cradle of domestic liberty. From another point of view, that of the The modern apartment or family hotel is investor in real estate, the apartment-the palace of their dreams. Twenty years house presents the solution of a serious

problem. The investor in stocks or bonds has usually no difficulty in collecting his income or realizing on his property, if his securities are marketable. But the owner of small parcels of real estate, such as houses and stores, feels that his income is in continual danger through the insolvency of one or more of its tenants. The owner of the most fashionable apartment-house on Madison avenue, right in the theater district, recently stated to the writer, however, that during the past seven years, in fact since his house was thrown open to residents, he has not lost one dollar, either through the failure of any tenant to pay his rent, or through



ENTRANCE TO THE "NEVADA."

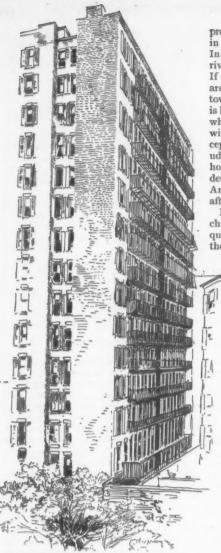


OVERLOOKING THE PARK FROM THE ROOF OF THE "OSBORNE,"

the temporary vacancy of any one of his number. The owner of another apartment-house, of a similar character, a few blocks further down the avenue, declared himself equally fortunate. None of the vast structures flanking Central Park, in which house-room costs from \$2000 a year upward, excepting one or two which have just been completed, have any unoccupied suites of rooms. To the investor such a piece of property returns a gross income of from \$100,000 to \$500,000 a year. The cost of the real estate is not proportionately significant with the cost of the structure. For instance, the New Netherlands hotel, which will be seventeen stories high, standing on the northeast corner of Fifth avenue and Fifty-ninth street, will cost Mr. William Waldorf Astor over \$2,000,000, exclusive of decoration and furniture, and of the land on which it stands, for which he paid about threequarters of a million. Landed property like this is not readily negotiable, but the income from the capital invested will be quite as sure as the continuance of human necessity for a place to eat and sleep.

Competition in the matter of municipal apartments, which are about thirty in area has been and is yet, very keen between the chief cities of the west and northwest-a competition into which New York city could not enter, on account of its insular nature. Chicago has spread herself like a green bay tree, over the surrounding prairie; Minneapolis and St. Paul, bitter enemies in the past, are growing big enough to put away childish things and to dwell together, as indeed they must very soon, in commercial if not in political unity. But a state of affairs more interesting than is to be found in the booming west, can be observed in Brooklyn.

The unwillingness of the great middleclass of New York city to pay the exorbitant house-rents demanded from residents in the metropolis, has increased the population of Brooklyn from 500,000 to 800,000 within the past four years. The exodus of the downtrodden Israelites from Egypt was less unanimous, scarcely more numerous, and certainly less precipitous, than is the flight of an army of thrifty business men, who can be seen every night risking life and limb in the mad struggle



for right of way over the Brooklyn bridge. Those who cannot escape in this direction, jam themselves into the cars of the elevated roads and seek refuge from the independent New York landlord in the remote parts of Harlem and Westchester county. A few indomitable spirits find their way into New Jersey. It is this diurnal exodus that has built and made At every approach of an enemy, the rural

profitable four lines of elevated railroads in Brooklyn during the past five years. In response to popular necessity, the East river will be spanned by other bridges. If the progress now being made by the architects and builders of New York city toward perfection in the apartment-house is kept up, within the near future, families who, at present regard this way of living with the disapproval rising from misconception, inexperience and hereditary prejudice, will forsake the isolated dwellinghouse, with its multiplicity of domestic details, and make a trial of the purely American plan, that is rarely relinquished after the first experiment.

Domestic necessity is the mother of architectural invention, and taught the Esquimau to build his house of blocks of ice, the only available material. The restless

Arab pitches his tent beside the

infrequent oases of the tropical The wigwam of the desert. American Indian is symbolic of his career as a hunter. The pygmies of Central Africa escaped their cannibalistic enemies of larger growth by living in huts among the branches of forest trees. The bamboo home of the Japanese, that can survive an earthquake, and the bungalow of the Hindoo, that is impervious to the heat, are examples of the same principle. In Europe, subterranean convulsions, heat or cold, were not, however, the only perils to be avoided, nor was physical safety the only object to be attained by these early architects. The Greeks, living in the land of mythology and perpetual summer, were the first to make architecture Religion was, to them, a an art. dominating inspiration. They relied successfully upon individual heroism for the defense of their country, and this period of poetry has given an artistic coloring to the architectural works of all succeeding ages.

With the ascendency of Rome, began a thousand years of war, when the beautiful gave way to the useful. Houses, towns and cities were primitively built to withstand besiegers; existence was perilous, except behind fortifications. The home of the unwarlike peasant was the legitimate and easy prey of military vagrants.

population swarmed into the already crowded cities, the walls of which were made as high and thick as possible. A town population, thus congested, had to seek in altitude the room they lacked in area. In this way the building with a separate home on each floor sprang into existence. Within the historical nucleus of every European city, invariably marked by the more or less well preserved ruins of the old walls of mediæval menace, the antiquarian tourist finds abundant evidence of a packed population. The architects of these warlike days had to meet a domestic necessity, not unlike that which confronts their successors today, who are called upon to solve the residential problem of-New York city. The situation is the same, and yet the cause is different. The American metropolis is on an island, the shores of which are boundaries, more impassable than was

the wall of old London town. There is a rock beneath, and room for expansion only skyward.

The American visitor to London is impressed with the low size of the dwelling-houses, as compared not only with American, but with every continental city. England's insular position saved her from the repeated conquests that make so tragic the history of every other nation of the old world. While the continental peasant lived among his cultivated fields at the peril of his life, the English farmer had no fears of foreign foe. This contrast in the habits of home-life caused a difference in national character, that is a matter of common observation even in this country today. The English emigrant makes for himself, if he can, a home in a house that is his own from garret to cellar. The Irishman and Scotchman show an even stronger independence of domestic spirit. Shantytown, that claptrap suburb of every American city, has no inhabitants other than Irishmen, who prefer to be "squatters," without a shadow of title to the soil on which their rickety home is erected-to be in hourly peril of ejection - rather than to live in more closely populated quarters, and pay rent. On the other hand, the German, French or Italian emigrant lands at Castle Garden, with his family, and marches them, with their Lares and Penates tied up in bundles on their heads, up Broadway, into the tenement-house district. The emigrant from any city in continental Europe has, in all probability, never known any plan of domesticity other than the apartment. New York state has been chiefly settled, and its population has been continually replenished, by the natives of these coun-



A PERPENDICULAR CAMERA PERSPECTIVE.

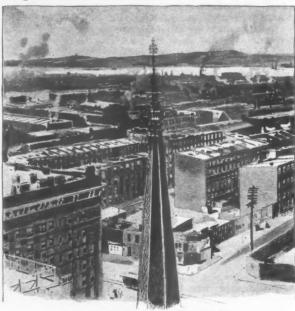
tries, and, therefore, the fact is less sur- not practical men. They rank with prising that eighty per cent. of the in- sculptors, painters and musicians. They habitants of the state live on the tenement- follow the traditional domestic lines laid house plan.

ment-house attained almost perfection, adapts his plans to the imperative needs Boston, Philadelphia and Chicago are just of the community, where he carries on beginning to imitate the magnificent work his business.

done by New York architects in this direction. While it is an evolution from the French flat, the development of the apartment - house is entirely a New York idea. The old capitals of Europe have absolutely nothing to offer by way of comparison. In Paris, Vienna and Berlin the steam elevator is a rumor, and steam heating a possibility of the future. Without these two essentials, no apartment-house of any size, more than six stories in altitude, is inhabitable.

Europe is behindhand, in this respect, for the reason that her architects are artists.

down by the engineer of feudal fortifi-In New York city alone has the apart- cations, while the American architect



THE CITY AS SEEN BY A CLIFF-DWELLER.

TO TRUTH.

By FRANK DEMPSTER SHERMAN.

DESCEND, thou angel of the flaming sword, And here, upon the noisy battle-field Of creeds, make known thy presence and thy shield, Whereon is writ the message of the Lord. Thou shining one, amidst the helpless horde Of those who grope in doubt's dark regions, wield Thy gleaming weapon till the shadows yield, That all may see and worship in accord.

Strike from the slave of ignorance his chain, And from the eyes of superstition tear The blinding fillet and reveal the light; Thou messenger of God, descend and reign Upon the earth and set His standards there-Torches to guide His children in the night!



MEDIÆVAL IDYL.

BY SARA CARR UPTON.

HE world is old in generations and has refined its thought by dint of reflecting on the wide experience which the centuries have presented. But even today only the romantic few are ready to accept the idea of a friendship between man and woman, at once passionate and intimate, pure and platonic. What will the modern scoffer say to the true account of such a friendship, which ran a sunny course through certain years of the dark ages in wild and barbarous Gaul?

This idyl of Queen Radegonda, in its noble simplicity and heroic revolt against the brutalities of the time, has lain almost hidden, while the loves and crimes of the siren Fredegond, who led her age in evil, give out a baleful light amid the greed, lust and treachery that fill the pages of the history of the Merovingian

kings.

In the year 522, King Hlothar of Neustria had set out to aid his brother Theodoric in fighting the Thuringians, neighbors and enemies of the Franks of The Thuringians lost the Austrasia. day, and their country, ravaged by sword and fire, became tributary to the Franks, while the spoil was divided between the conquering kings and brothers.

Two children of the royal race, son and daughter, fell to the King of Neustria's share. The girl, Radegonda, a child of eight, touched the sensual fancy of the Frankish prince, and he resolved that she should be reserved for himself.

The lovely child was taken to live in a here, through some careless whim of her would feign to be absorbed in reading, so

master and future husband, the little prisoner was trained in all the graceful and refined ways of civilized women. daily lessons were Latin and Greek literature, and readings from the poets, both pious and profane. The child's intelligence was alive to all delicate impressions, and her little soul turned eagerly to the company of books, which she began to love as the way into an ideal world far other and happier than that around her. The books which most touched her imagination were the stories of saints and martyrs, and when her childish brows bent low over the folios that told her of their lives, the tears fell fast, and the little heroic heart saw more glory in the crown of martyrdom than in the royal diadem destined for her graceful head. The religious enthusiasm which then monopolized all that was high and noble of human faculty, carried her with it, and, as the young barbarian imbibed the ideas and habits of civilization, they absorbed her in their purest type-the Christian.

The time approached for her marriage with Hlothar. The royal captive shrank from this union more and more. When the summons came, her fluttering heart tempted her to vain flight. But the bird was soon recaptured, and, at Soissons, Radegonda was crowned an unwilling queen and wedded to the Neustrian king.

This marriage was felt by Radegonda to divorce her hopelessly from all that she most aspired for. The presence of Hlothar was odious to her, and, when royal palace near the river Somme, and summoned to an interview, Radegonda

The signs of aversion had little or no effect on the king. The beautiful Radegonda was his wife, his possession, and no scruples of conscience at the violence he did her moral nature troubled him. He only said, with a laugh: "I have a nun for a wife instead of a queen."

In truth, there was only one issue, in those days, for souls of Radegonda's kind. But to a queen, seeking the cloister hinges of its gates did not swing a smooth admission. The desire was with her, however, by day and night. For six years the barriers seemed insurmountable. At the end of the time they remained, but an event happened that increased her despair and courage. The brother captured with her, who had stayed at the court of Neustria, and who was the one object of her love, was put to death by the king's order, for uttering, in boyish bravado, some patriotic boast.

This outrage on one so near to her blood and her heart, gave the queen strength. She said to the king that a strong desire for spiritual consolation inclined her to see Bishop Médard, renowned throughout Gaul for his sanctity. The king, having no suspicion that she could or would defy him, and hoping that the bishop would send her back calm and resigned, as so much grief and so many tears had grown wearisome, gave orders for her departure and a royal escort to accompany her.

At Noyon, Radegonda found Bishop Médard at mass. All at once, in the presence of this pious man, in the sanctuary, at the very steps of the altar, her longstifled emotion broke forth in a cry from her heart, without preface or prologue: "Holy priest, seal me to the service of the Lord, I implore you! I desire to leave the world and to put off these royal trap-

pings!"

Such boldness and zeal amazed the bishop. For a moment the queen seemed a lovely apparition. But an instant's reflection showed him that it was a sudden make. Dare he annul a royal marriage the tomb of Saint Martin.

that her attendants would, in wonder, Now, too, the bishop became aware of the have to remind her of the honor waiting presence of the queen's escort of Frankish soldiers and nobles. They had begun to suspect the queen's purpose and closed around the bishop, with threats, calling upon him not to give the veil to a woman wedded to a king, nor to separate a queen from her royal spouse. The more violent among them forced him away from her, into the nave of the church. During the tumult the queen fled to the sacristy, where her eyes fell upon a penitent's against her husband's royal will, the cloak that lay near by. She caught it up and threw it about her, completely hiding her regal apparel and covering even the diadem on her head. In this guise she walked straight to the altar, where the bishop was now standing alone, thoughtful and irresolute.

Radegonda had resolved to put to the test the priest's zeal and sincerity, and her all was at stake upon his answer. She spoke to him rapidly, in firm, low tones: "If you refuse to consecrate me to God-if you fear man more than you fear God-you will answer for it before Heaven, and the Good Shepherd will claim

of you the soul of his lamb."

These mystic words breaking in on his revery, the sudden appearance of the kneeling penitent, startled the holy man like a celestial vision, rousing his conscience above thoughts of prudence and policy. He hesitated no longer, but declared Radegonda's marriage annulled and herself dedicated to a holy life, by virtue of his episcopal authority. Even the Frankish nobles and vassals seemed to fall under some spell and dared not approach the woman, who, formerly sacred to them as queen, was now doubly so by her consecration to Heaven.

Her next thought was for her personal safety, for the king's anger would be heavy and the pursuit hot when he should learn how his captive had defied him, so that she must instantly fly from Noyon and away from the Frankish dominions.

The new devotee, therefore, embarked on the Loire and sailed until she reached Tours, where she halted for shelter in one and perilous decision he was called on to of the many asylums of refuge built near Here, under contracted under the Gallic law and in the shadow of the basilica, days of agiaccordance with Germanic customs-cus- tation and apprehension went by while toms which the Church tolerated lest all she sent embassies to the king, sometimes hold over the barbarians should be lost? haughty, sometimes appealing, beseeching him to renounce all thought of seeing ladies, among their other duties, to disher again, and craving his permission to fulfill her religious vows in peace.

Hlothar was deaf to her prayers, and made preparations or threatened to come himself and fetch her back by force. Radegonda, then, in despair, ceased her importunities and gave herself up to long vigils, fastings and prayers, mingled with scourgings and disciplines so severe as to impair her fatal beauty. She emerged from this trial pale and hollow-eyed, and convinced that she must increase still further the distance between herself and her angered spouse. This time she removed to Poitiers, where she was to pass the rest of her life.

At last, conquered by that moral force before which even the impetuous will of a barbaric king had to bend, Hlothar yielded, and, at Poitiers, in the sixth century, this daughter of Thuringian kings was permitted to found the Abbey

of the Holy Cross.

Several years elapsed before the queen's dream could be realized, in spite of her impatience and the good help she had from Pientius, the bishop of Poitiers. Not until the year 555 did Radegonda, at the head of a train of young girls who were to share her retreat, enter the precincts of the now completed edifice which had arisen near the gates of the town. Everything that Radegonda possessed, by right of dower or gift, had gone for its construction and to provide for this family, henceforth to be hers.

The conventual rules laid down by Radegonda were thought somewhat severe as they involved a complete abstinence from meat and wine; yet the queen and her maidens lacked none of the occupations and recreations of a refined existence. Literature was their chief occupation, aside from the hours devoted to prayer and the singing of the Psalms. A nun was chosen to read aloud while the others were busy embroidering, weaving, transcribing books or painting missals.

Most of the young girls who formed the community were Gauls, daughters of senators, or from families where habits of retirement and domesticity had, in some degree, prepared them for the pious care of their directress. They were drawn to Radegonda by the spell of her Christian devotion. It fell to the part of these

pense to travellers and visitors a large hospitality that included not only prelates and church dignitaries, but also laymen of rank and distinction.

Thus it happened, in course of time, that there came to the Convent of the Holy Cross, for entertainment, a certain wandering minstrel, Venantius Fortunatus by name, who found the entertainment and the company so much to his mind that from that moment he ceased his wanderings and took up his abode in Poitiers.

Fortunatus was an Italian, born at Treviso and educated at Ravenna. his distinction that he was the last poet of the Gallo-Roman fashionable world. Travel was full of interest to him, and, being a man of some talent and much savoir-vivre, he was "the favored guest of many a fair and brilliant throng.'

The courtier-poet journeyed about from house to house, flattered and feasted by rich noblemen who took pride in patron-

izing the arts and letters.

After these visits a correspondence would ensue and letters from him to his hosts recapitulate the pleasures enjoyed in their society and describe new scenes and incidents, in the form of elegiac verse.

There is no better history than such personal records, and they paint the manners and customs of a time as nothing else can do. These versified epistle shows us that an intellectual life was common ground even in a world of barbaric tendencies, and that the light never ceased to burn at the shrine of letters. In themselves, though full of love for the noble and beautiful, they serve only to record the decadence of art.

The poetry of Fortunatus is pretentious and affected in style, overladen with puerile play on words, and we should not be inclined to linger long over it, were it not for the personal record it contains. From it we have a full and complete picture of his friendship for Radegonda, and a great part of it is made up of the recital of the daily details of a life passed in her service, beginning from the moment of his chance visit to the convent at Poitiers.

From the first, the queen welcomed him as an illustrious guest and persona grata, but it could not have been long before the lady-abbess, with her fine perceptions, discovered that her guest had a cultured mind and a soul into which she wit and knowledge of the world to becomtilled, so to speak, with the sensitive fiber Abbess Agnes. of the poet, left him in no haste to withmade ready to resume his wanderings.

"Why should you leave us?" said Radegonda. "Will you not stay?"

These words echoed the desire of his heart, but had seemed too bold to be utwas accepted, that their sympathy was or of recrossing the Alps to his native Italy. Poitiers was his home now, and the poet had taken service under the cloistered queen.

Fortunatus at once proceeded to take abbey became more close and binding, so that, without further delay, he could as-Abbess Agnes, a young woman deeply attached to her, whom the queen had appointed ruler of the convent, though she herself remained its real head and moving

spirit.

In addition to the need which many women feel of being governed by a man, there were special reasons in those days, at the Abbey of Poitiers, for the intervenestates belonged to the establishment, which had not only to be cared for, but to be guarded from frequent invasion, rapine and violence. These attacks had to be parried with royal edicts, episcopal excommunications, and constant negotiations with dukes, counts and judges not overanxious for justice, but not unwilling to be moved by interest or private affection.

Here was a broad field for Fortunatus' energy and tact, occasions for frequent ment would have refused to cherish. journeys and parleys with kings and

could inspire reverence and devotion. ing the ambassador, intendant, wise coun-Radegonda's delicate appreciation, dis-sellor and friend of Radegonda and her

The earnest seriousness which Fortudraw from its sunshine, and he tarried natus threw into this service is more remany days after the time fixed for his de- markable in the contrast it forms with parture. Finally, every excuse for delay his mode of life, otherwise luxurious and being exhausted, the traveller reluctantly self-indulgent. With his light and easy nature was united the national suppleness of intellect which disposed him to be a Christian in imagination more than in reality. His capacity for the wine-cup and good cheer were Anacreontic, and he tered or even harbored. Now the queen sings, in a variety of verses, the delights had spoken, and he felt that his homage of the banquets given by Radegonda to noble Roman or barbarian guests, where mutual, and that henceforth there was to he was the bright wit and improvisatorbe for him no more thought of wandering banquets at which Radegonda and the Abbess Agnes dispensed the dainties without partaking of them. Beside these banquets, little feasts were sometimes served in the convent when the three friends alone met. These feasts recall orders as a priest of the Metropolitan scenes of antique life in Greece or Italy, church, and thus his relations with the with the singular difference that they were given by nuns to a bishop (for Fortunatus had now been made bishop), with sume the cares and responsibilities that such elegance of refinement and such had hitherto fallen on the queen and the dignity of discourse as to forbid the thought of any but a superficial resemblance to their prototypes.

It is not less extraordinary to note that the tenderest epithets were used between the three friends, and the words "brother" and "sister," from the lips of the Italian, were combined with the expressions "my life," "my light," "delight of my soul." That some whispers of scandal were tion of a firm and masculine hand. Large breathed seems probable, or it may be that Fortunatus wished to forestall any that might arise, for there are some verses in which he declares, in accents of much dignity and sincerity, that his love is that of a fond brother, and solemnly invokes Christ and the Virgin to witness to the purity and innocence of his heart.

The poet nature in Fortunatus made it possible for him to comprehend in this daughter of the fallen Thuringian kings the woes which his own bright temperabecame the confidant and consoler of her courts. His talent for pleasing men of life. The past bitterness of Radegonda's all sorts had found its use in the service existence had sealed her with an inward The gay guest and brilliant and unconquerable sadness in spite of the courtier turned all the resources of his resistance made to it by her strong will and brave soul. Time had changed her hair from raven to gray, but in her mature age she was better able to realize the meaning of these memories of her early years in her own country, among her own people, and they besieged her soul with the added poignancy of a deeper comprehension.

"I am nothing but a poor captive," she would say to her sympathetic listener. The image of her own dead and banished race-cousins whom she knew only by name-an uncle, with his son, who had fled to Constantinople-never left her. She who in a strange land had only loved that which was Christian and gentle, cast the glamor of a wild poetry over her patriotic regrets, like an echo of the national chants which had been crooned over her cradle in the palace of her ancestors. The poet has written some verses in the name of the queen, and we seem to hear from her own lips these outbursts of her grief that had found no expression.

"I have seen women dragged barefoot through the blood of husband, brother, marching to slavery, wrists bound and hair floating. Each one had her own tears, but I wept for all. I wept for my dead and now I weep for my living. Though my tears cease to flow, my sighs to be heard, my grief is never silent. When the wind murmurs I listen for it to bring me news, but no shade of my race has ever come to me. A whole world separates me from those I love. Where? Where are they? I ask the wind that rushes by, I ask the clouds that pass, I ask the birds for word of them. Were it not for my sacred vows I would find my way to them through tempest and wave. Sailors might tremble but I should know no fear. Were the ship dashed in pieces I would cling to a spar, or were no spar left I would swim till I reached their arms."

The history of this little group has been thus recorded by Radegonda's friend, and every passing phase of their daily life set down in poetic guise. The poet chants of every event great and smallthe sorrows of parting, the heaviness of absence, the joys of re-union, little presents given and received; the fruit, flowers and dainties sent him from time to time from the convent. In his leisure moments he wove baskets for them, and he describes his work. He calls the discourse at their little suppers "delicious talks," and he laments certain solitary repasts from which "the charm of eye and ear were missing." For every anniversary there is a poem-the birthday of Agnes and the day when Radegonda retires to her cell for the long fast. He writes of this occasion in passionate tones that seem almost profane.

Fortunatus was celebrated in his time, and might not unreasonably have cherished the hope of immortal fame for his poetry such was the adulation of the barbarians for his jewx d'esprit. His least notes scribbled while the messenger waited, his simplest couplets improvised at table, ran from mouth to mouth, were copied, read and learned by heart. The fame of Fortunatus, however, will not rest on his poetry, which is but the last flickering ray of a dying literature. The loyal and devoted friendship revealed through its pages is his claim to our remembrance. These friends were united by the passion of friendship without love's fever and enjoyed a cheerful religion without asceticism or bigotry. Their lives shine out as a bright and sunny gleam against the checkered background where we see by moments, the ruthless savagery of pagan warriors, the exotic semi-civilization of Gallo-Roman nobles and the fervent Christianity of the early churches.



PÈRE VULCAN'S CONFESSION.

BY FRANÇOIS COPPÉE.

turquoise sky-Père Vulcan, the old tohis pipe with intense satisfaction.

NE June evening-you know those to say that his pipe was smoked by him. pure, calm twilights, when it seems For in the household—a very harmonious as if the night would never come, and the one, by the way—consisting of Père Vullissom swallows pass and repass in the can and his pipe, the latter was evidently the more important personage, the one bacco merchant of the village of Saint who, if I may so express myself, wore the Martin l'Église, was sitting on the wooden breeches. Père Vulcan, so called by all the bench near the door of his shop, smoking inhabitants of the village because of the cloud of smoke in which he was always When I say he was smoking his pipe, enveloped, belonged to his pipe. He was I express myself badly. I ought rather forever wiping and polishing it with the

back of his sleeve, or cleaning the stem with a wire. and when it was not in his mouth, it lay next his heart, inside of his vest, luxuriously ensconced in its case. Between ourselves, I verily believe that he considered it a living person, endowed with reason and will. After having filled it with caporal, before scratching his match, Père Vulcan cast upon it a tender and respectful glance, as if asking permission to light it, a permission which was doubtless accorded by some sign known only to himself; for, by the happiness and gratitude depicted upon the face of the good man at the very first puff, it was evident that he was then enjoying a rare favor, and that the pipe had allowed itself to be smoked only because it was entirely willing.

It was about ten years since this sentimental smoker came to live in Saint Martin l'Église, in La Brie, in order to take charge of the bureau de tabac, whose proprietor. the widow of a prefect, resided in Paris. With the small revenue derived



" LISTEN, WHILE I TELL YOU."

from this source, and his pension as a non-commissioned officer, Père Vulcan, whose real name was Masson, lived perfectly contented, devoting the considerable leisure which he enjoyed to his dear pipe. Everyone who entered his narrow shop to fill his pouch or take a drop, was the friend of this honest and stalwart old The young peasants loved to hear the story of his campaigns-Solferino, Mexico, and the battles before Paris,-which he related with a commendable brevity; and the good wives held him in esteem because he would have no drunkards at his little zinc counter, being always the first to say to his patrons, when they began to grow warm: "That's enough for this evening, comrades! Go to bed!"

So, on this calm and beautiful evening of June, as Père Vulcan sat smoking in his door, he saw Monsieur l'Abbé Poulier, his fat figure girded in his soutane, and his Roman hat tipped back on his head, coming down the street, to make his daily purchase of four sous' worth of snuff.

The friendship between this smoker emeritus and this inveterate snuff-taker was of ancient date; for both were fine fellows. And this evening, the curé, after taking a pinch from his freshly filled box, sat down upon the bench, beside Père Vulcan, to enjoy the air and a bit of gossip.

But the tobacconist was silent. In vain did the abbé, who took a lively interest in the things of this world, endeavor to turn the conversation upon the cherries, which that year were particularly luscious, or on the oat crop, which promised to be magnificent; the old soldier only replied in monosyllables. He had become suddenly grave, as if the presence of the priest had stirred in his heart the memory of some past trouble.

At last, he removed his pipe from his mouth, looked at it a few minutes, as if taking counsel of it, and, having probably received its tacit approbation, he turned brusquely to the Abbé Poulier.

"Monsieur le curé," he said, a little embarrassed, "you do not see me at mass, nor at vespers, yet you are not angry with me on that account, and you are right, for you know that I am alone in the house and cannot close my shop during the stars were beginning hours of service. At bottom, I am a calmly began his story:

religious man, and if ever I am ready and feel that I am going to lay down my arms, never fear; when that day comes, I shall send for you and the good God and all the pharaphernalia. Before my departure, I shall pass in review before you; you will expedite my journey to paradise, and send me to Saint Peter in good order - that is understood. have done nothing unpardonable, you know very well. Still, there is one action of my life which troubles me more than all the others, whenever I think of it. Oh! as to that, I am sometimes so troubled about it that I am often on the point of going to see you, to tell you the whole story.

"Nothing can be easier," replied the priest, surprised at the serious tone with which Père Vulcan uttered these last words. "Every Saturday, from five to six, I am in the confessional—"

But the tobacco merchant interrupted him:

"Ah, that is it! It is more complicated than you think, and there are moments when I ask myself whether this action of mine is the worst or the best of my life. Listen, monsieur le curé! With you priests a somet is as safe as in a tomb. If I tell you about it, here, just as we are, simply to get your advice—the advice of one man to another—this secret would die with us, wouldn't it?"

"Certainly!" said the curé. "Even outside the confessional, I am very discreet. And if it will relieve you to make me your confidant—"

"Well, then, thanks," cried the good man. "You will do me a real service."

Then, lowering his voice: "Ah! my faith, it is a terrible story! Never mind, I have confidence in you, and I have an idea that you will judge me indulgently. In two words, this is the whole affair: I was complicated in a swindle and I killed a man; but, for all that, I think I did rightly. Listen, while I tell you."

Startled, the abbé had instinctively moved to the end of the bench, but Père Vulcan paid no attention to this. He emptied and refilled his pipe carefully, lighted it leisurely, mused a few moments, looking into the now olive sky where the swallows were no longer flying, and where the stars were beginning to twinkle, and calmly began his story:

ceived the bounty. I was a sergeant, best dressed non-commissioned officer of understand. I do not even know how to always a five franc piece in his pocket to sign my name. So my military career oblige a comrade. A jewel; you underlough, and I should be retired with the myself to do than to devote himself body medal, as indeed came to pass. The old and soul to such a friend as that? army was full of weather-beaten old fellows like myself; many of them grum- duel, and he gave a pretty thrust to anblers with a grain of salt in the throat other sergeant of the company, who had which would not melt, but brave enough under fire for all that. I have nothing to say against the regiments of children that we have today. We shall see what stuff they are made of when the time comes.

veterans with two chevrons, although I have never been over fond of work. Well, one day they transferred to my company, the third of the first battalion, a volun- I would have allowed myself to be cut in teer recruit, a well-born young man, who pieces. had not money enough to pass through the military school, but who still wished though by the longest way, that is, by structor, I was the first to put a musket one an example, a model soldier, just as I into his hands, and it was I who taught had said. At Châlons, where they athim the 'right about.' Bah! At the end tempted to reform the shattered army and of a fortnight he could have taught me. consolidate what was left of it, he was cal—that was his name—and, at first, I to 'thee and thou' him, and in saying: and to make the first steps easy.

an orphan, without fortune, that he had was able to come and see me at Val de

"In the first place, I must tell you that obtained his education as a free scholar about 1868, before the war, I was already in college, and that his only revenue was an old gaffer who had seen fourteen years twenty francs a month, received from of service. I had just re-enlisted and re- an old relation. For all that, he was the and I was always to be a sergeant, you the company. Not a sou of debts, with was settled in advance. One more fur- stand? What better had an old fool like

"Then, one day, you see, there was a been 'plucked' at Saint Cyr. When I asked Louis Pascal the cause of it, he said: 'Nothing. A mere trifle.' But the next day I learned that this half-fledged cadet from Saint Cyr,-the little pedant! "I was among the less stupid of the -had laughed at the way I rolled my r's at drill, and that Pascal had fought on my account. After that, you know, monsieur le curé, he had only to whistle and

"Then the war was declared, and we were in at the first blow, at Wissembourg. to be a soldier and to wear an epaulette, It was there I saw Pascal under fire. Oh! superb! Brave, but cool, with only a promotion from the ranks. I liked him at wrinkle like a V between his eyebrows, first sight, the rascal! A fine fellow, a as firm as an old veteran and handling blonde with a brown mustache, with the his gun as if on parade-it is under fire fire of courage in his eye, polite and good that we judge a man. And during the natured with everyone, but with some- retreat it was not our platoon which thing serious about him which made one straggled and threw away their arms. say, 'You'll be an officer.' As his in- Louis was on hand, tireless, setting every-A born soldier, I tell you. It was in the made an officer, and it was right. Oh, blood. I took a fancy to this Louis Pas- the pleasure which I took in not having was able to give him some good advice 'My lieutenant!' Not long after we were crushed again at Sedan. But we were in "A corporal at the end of six months, the division of Vinoy, which escaped and he soon got his gold braid, and we be- reached Paris, where there were none too came fast friends. Although he was only many red trousers, and where we were my equal in rank, I knew that he was always the ones to be sent to the front in my superior in every way. But he was every little affair. At Champigny I got a good enough not to make me feel it, ball in the thigh, and should have been showing me, on the contrary, the defer-captured by the Prussians if my brave ence due to my service, always recalling Pascal had not taken me under his arm the little nothings which I had done for and carried me to an ambulance, in the him when he joined the regiment. Ah, a midst of the firing. You can imagine fine fellow! You must know that he was how I adored that fellow! So, when he

Grâce, after the capitulation, just as I was beginning to walk with a cane, when I I threw etiquette to the dogs, and fell into his arms crying like a fool. A lieutenant, and decorated at twenty-five! He was sure now to become a colonel, a gen-But there eral—anything you please. was a drawback; we were to be separated. He was sent to Bordeaux with his new command, while I remained in the regiment, where I had only three more years to serve before obtaining my final discharge.

"But Lieutenant Pascal was not the man to forget his old companion in arms. Every two months I received a little note from him, very friendly, with a bit of a check for my tobacco and my little comforts; and I replied as best I could, certain of the pleasure it would give him to

see my scrawling hand.



IF MY BRAVE PASCAL HAD NOT TAKEN ME UNDER HIS ARM.

"Time passed. At last I was free, and as my five hundred francs pension was saw his two bars and his cross, my faith! not much, not enough indeed, I looked about and found employment as yardkeeper with a building contractor near the Ivry station. One afternoon, as I was piling some old iron, I heard someone call me by name. I turned, and there was my lieutenant, in a civil costume, with a tall hat, but as fine looking as ever in his frock coat with the bit of red ribbon in the button-hole. Ah! he was just as cordial as ever, embraced me, asked if I was well, if I was happy, and when I happened to say:

" Do you know, my lieutenant, this is the first time I ever saw you in civil dress?'

"" Well, my brave Masson,' he replied, ' you will never see me otherwise again.' " 'Why, what does that mean?'

"'That I have sent in my resignation."

"My heart gave a bound. What! So good, so handsome a soldier abandon the army, renounce certain promotion, a superb career! Doubtless he must have had good reasons, but for all that it was enough to break my heart!

"While walking beside me the length of the yard, full of litter, he told me his story. A woman! I might have guessed it. He had left the service on account of a woman! At Toulouse, where he was in garrison, my ninny of a lieutenant had fallen madly in love with the daughter of a professor in the Lycée, who lodged in the same house with him. But, you see, an officer cannot marry without the regulation dowry, and the poor boy had not the first sou of the necessary thirty thousand francs, nor had the future father-in-law either. Then, in a moment of folly, he had sent in his resignation. Fortunately he had found a good position with a banker in Paris, on account of his decoration. And, really, he said, he regretted nothing, since he was happy as a god with his little wife, who was soon to present him with a little baby. And he came to invite me to breakfast with them on the following Sunday in their little lovers' nest on the fifth floor of a house in the Boulevard des Batignolles.

Madame Pascal I pardoned the folly of my lieutenant. A perfect love of a blonde, young, and so gay, so agreeable, with her blue eyes full of goodness, which had turned his head. It was charming to see them together. Evidently he loved her passionately and tenderly, as one loves a woman and a child. Oh! little lady treated me like an old friend, and it did my heart good to learn that her husband had often spoken to her of his old comrade. There was a certain Saumur wine not to be despised and I emptied several glasses to the health of the little one they expected, so that as I returned to Ivry-la-Gare I was a little under the weather and sung to myself on the way. But, in spite of that, I was thinking all the while what a pretty couple my lieutenant and his blonde were, and wished them every good luck you can think of.

"At first they had it in plenty. It seems that Pascal had, at the very start, mastered the business, and that so well that, at the end of two years, his patron made him his partner, and my lieutenant went every day to the bourse and was making money as fast as the other. And at home, too, the same good luck. Three babies in three years-two boys and a girl. And such fine ones! true children of love. The first Sunday of every month -that was understood-I dined with the family. For prosperity does not change a true heart, and neither the husband nor the wife were ashamed of their humble friend. Ah! they did not live on the fifth floor any more, but in a handsome apartment on the first, Boulevard Haussman, if you please, and your plate was changed by a servant in a white cravat, To do my hosts honor I was on my best behavior, of course; but, after all, I looked like a man of the people, a poor devil-in short, just what I am. Well, monsieur le curé, I was always greeted at the Pascals' with the warm grasp of my lieutenant's hand, and the smile of his pretty wife, and the children ran to embrace me the moment I arrived. Find me many rich people like that !

"All went well until the winter of 1880;

"So I went in my best frock coat, spick good fortune, I said to myself that, after and span as for the Sunday inspection. all, he had made a famous stroke in aban-And as soon as I set my eyes upon doning the career of a soldier and resigning his sword. But one day, the first Sunday of December, while breakfasting with him, I noticed that he was absentminded, preoccupied, and that every once in a while he twisted the end of his long, brown moustache between his teeth, as he used to do when anything troubled him.

" 'What's up?' I thought to myself, What a delightful breakfast we had! The as I went away. 'The children are well and growing finely. When he looks at his wife, there is still the light of the honeymoon in his eyes. Unless something is wrong in his business-that's the devil of money, one is never sure of anything.'

"That night I slept badly-true friendship, you see, is a sort of barometer—and all the next day I was restless. I had a

presentiment of trouble.

" About ten o'clock in the evening, just before going to bed, I lit my lantern and began my night round in the yard, as usual. It was wet and muddy. Not a star in the sky. Suddenly someone rang at the gate. That surprised me. Who could it be, so late? I ran to open it, and, by the light of the lantern, recognized my lieutenant, wrapped in his great fur coat. Ah, how pale he was! and between his eyebrows I saw that wrinkle, shaped like a V, which I used to see there in battle, when things were getting warm. Then, suddenly, he spoke:

" ' Masson, old fellow, I want you. Can

you come with me-at once?'

" Of course. Present!" I replied un-

hesitatingly.

" 'Tell me, can you leave the yard, and come back in an hour or so, without being seen, without anyone suspecting anything?

" 'Nothing is easier. I am all alone here at night. Who pays any attention to me? The quarter is deserted, not a cat

in the street after sundown.'

" 'Come, then,' said my lieutenant, in a voice which boded no good. 'Put out that lantern, shut the gate, take the key

in your pocket, and follow me.'

"Of course, I obeyed him. I was all dressed to go out. I had on my cap and my goat-skin coat. We followed the quay as far as the Pont d'Austerlitz. Not a and many a time, thinking of Pascal's word was spoken. Now and then I stole

a look at him, sidewise. His face, half- but it was dark there, nevertheless. hidden by his fur-collar, was drawn almost stumbled over a bench. moustache. I longed to question him, to voice: ask him where we were going at such a

pace; but I did not dare to. As we passed before the Halle aux Vins, he said between his teeth:

"'You are not tired? You can go on in this way as far as the Esplanade des Invalides? It is there we are going.'

" As far as you please, my lieutenant.'

" Ah, I shall never forget that walk! One, two-one, two -the military step; the quays, and still the quays, with the lights of the gaslamps reflected in the black river. There was almost no one abroad, the weather was so nasty - now and then a carriage, a few pedestrians hurrying home, and, at intervals, an omnibus rolling heavily along with a sleepy air. As I told you, when some evil is about to happen to a man whom one loves dearly, as I loved Louis Pascal, we have a presentiment, we divine it; and my heart went 'poum! poum!' beneath my coat.

"We reached the esplanade at last. It was absolutely dethe quarter before eleven. My lieutenant enough to cook an egg. entered a clump of trees near the Gros-Caillou. There were no leaves on them, don't you?'

and pinched-it frightened me. And all dropped upon it as if overcome with the time he was biting the ends of his fatigue, and said to me, in his terrible

" 'Sit down.'



"NOW AND THEN I STOLE A LOOK AT HIM, SIDEWISE."

"But when I was beside him, he seized serted. I heard a distant clock strike my hand, and I felt his hot palm-hot

"Then he said to me: 'You love me,

tion to ask me?

"I am going to ask you a very grave service.

" Go on.

" 'Well, listen-I am a ruined man!'

"Oh, monsieur le curé, the tone with which he uttered those words made me

shiver!

" Ruined beyond help! Ah, why was I not content to remain the poor officer, who had not twenty francs left in his pocket at the end of the month, after paying his board and lodging, after settling the accounts of the tailor, the bootmaker, and all the rest of the crew? But what is done is done. Fancy, old comrade, my partner, Krielmann, is a rascal; he has used my signature dishonestly and has compromised me in such a mess of doublewill be over-bankruptcy, and we shall both be dishonored!

"It was enough to break my heartsuch a confidence. In a flash, I remembered the paymaster who had proved a defaulter-an old story, when I was at Mestaganem-a veteran with gray moustache, degraded before the whole regiment senior sergeant tear off his epaulettes!

well know,' my poor friend went on. But my name is on the papers; I am responsible. We shall fail, for an enormous sum. But be easy! Your lieutenant will not live to be a bankrupt. This evening, after that miserable wretch, Krielmann, had told me the whole situaand loaded my army pistol.'

"'You are going to kill yourself?' I cried, numb with surprise and grief.

" 'Would you rather see me arrested, Legion of Honor?' he replied, 'for that is what it means—the police court. Come, no weakness! I know that I am speaking to a man. You must know that there is nothing left to do but to throw up the game.'

"Monsieur le curé, I loved my lieutenant like a brother. But honor, before all. Since things were so, I had nothing to do but to approve, that is to say to keep take a long walk.

silence.

"So it is agreed,' the poor fellow itary pedestrian? Oh! were I to live

"Come, my lieutenant, is that a ques- continued. 'If you refuse what I am now going to ask of you, I return hometo put a ball in the right temple-to die with the agonizing thought that I leave my wife and children without a penny, in miserable want. Well, from that agony, my old comrade, you can save me.' I thought he was going mad, and, mechanically, I said: 'How?'

"But my lieutenant had his plan, a

terrible plan, as you will see.

"'During the last few years, as you know,' he whispered, drawing closer to me, 'a great deal of money has gone through my hands. I have saved nothing. I thought it would last forever, that there was time enough for that. Besides, it was so sweet to surround those I loved with comfort and luxury! Still, I took one precaution. I insured my life in favor dealing that in a month, two months, all of my wife. If I die a natural death-for in the case of suicide the policy is voidshe will have a hundred thousand francs. Now, listen to me attentively-here is a knife, take it-I am going to give you my watch, my purse-you will give me one blow, in the heart; then you will turn my pockets inside out, as if I had been robbed; afterwards you will go home, to drawn up in line of battle, and I saw the the yard, taking the knife with you. Remember above all to carry the knife with " I have only been weak, blind, as you you—nobody will suspect anything. Tomorrow they will find the body of a man here, murdered; the company will pay the insurance, and my family will have bread! I know very well I am defrauding the company; but, bah! it is rich, and besides that is a matter for my own conscience. I will explain it to the good tion, just as it is, I went home in despair God, if there is one. What I ask of you is simply to render your friend, your old comrade in arms, this last service. Do you understand, my old Masson?'

"Did I understand? Yes, indeed! But convicted, stricken from the rolls of the I was frozen to the very marrow. Kill him with my own hand! my lieutenant! my only friend! No! No! I should never have the courage. But he took my hands, entreated me, sobbing on my shoulder with the pleadings of a little child. The poor fellow, knowing well that I would consent at last, had told his wife, after dinner, that he was suffering from a headache, that he was going to What more natural than a night assault, the murder of a sola thousand years I shall never forget the terrible hour I passed there, in the night, on that deserted bench, listening to my poor Pascal sobbing and asking death at my hand.

"At last, because of his entreaties and through pity for his family,-if I horrify you, monsieur le curé, so much the worse-he persuaded me to do what he wished of me, and I obeyed him. Yes, I pressed him to my heart, I kissed him upon the mouth, as in the fencing hall before a bout, and I struck him full in the chest and fled as if my clothes were on fire. At the Pont de la Concorde I threw the bloody knife in the Seine, with the watch and the purse, and returned as fast as my legs would carry me to Ivry, where I wept all night long in my garret. everything happened just as he had foreseen. It was supposed some vagabond had killed him for plunder. The insurance was paid and Madame Pascal had the wherewithal to live and educate her children.

"But after what I had done, the sight of them was a torture. No! See the woman whom I had made a widow and whom nothing could console! See the poor orphans who leaped to my neck when I opened the door, and whom I had to caress with the hand which had killed their father! No! I could not endure it. It was then that this tobacco agency was offered to me, and I accepted it in order to get away, to leave Paris. I write to them only at long intervals, and I know that they are not utterly miserable. My act was, at least, not wholly useless.

"But, for all that, I often think of it, in the night, when I cannot sleep, and more than once I have wished to go to your sentry-box in the church there and tell you the whole story, monsieur le curé. Then again, when I reflect upon it, I say to myself that I could not have refused that service to my lieutenant, that I played the part of a true friend, and my conscience is at rest. Well, tell me, now, frankly, what you think about it?"

The Abbé Poulier, who had listened to Père Vulcan's story with deep emotion, was silent for some minutes. He opened his snuff-box, thrusting in his thumb and



"I THREW THE KNIFE INTO THE SEINE."

forefinger, as if to extract from it his answer. At last, making up his mind, he took a copious pinch, and said to the old soldier:

"My dear friend, if we were in the confessional it would be my first duty to remember the holy commandment: 'Thou shalt not kill,' and I should have no alternative but to command you to repent of your deed. But here, I content myself with giving you my hand and with saying, 'You are an honest fellow.'"

With these words the curé departed. They had surely done great good to Père Vulcan, who, nevertheless, had one scruple left. Alone in the starlight, he turned for consolation to his pipe, turning it over and over in his hands,—his pipe, which was in some measure his conscience. He looked at it for a long time, and doubtless found that it had the appearance of belonging to an innocent man; for, suddenly reassured, he sought and obtained permission for a last smoke before going to bed.



IN THE WORLD OF ART AND LETTERS.

HE monthly magazine differs from the daily or weekly publication in the care with which its articles are selected, the whole world being levied upon for tribute to its pages and each article being the subject of some weeks' consideration before its use is finally decided upon. Its final presentation, with all the accessories of illustrations by the cleverest artists, printed in the most perfect form upon fine paper, is merely a feature of the magazine. The main idea is to give the reader nothing that will not be worthy of his attention, whether from the point of art, philosophy or human interest. Two departments, in which a magazine should be of service to its readers, have remained unfilled in The Cosmopolitan because of the difficulty of encompassing the required material within the limited pages permitted by the maga-They have been the subject of serious study, the final result being presented in this issue. These departments are novel in their plan, and will, it is hoped, be found to supply the requirements. How to keep posted concerning the many thousand new publications issued each year is a problem which confronts the man or woman occupied with the many cares of our nineteenth century civilization. The four or five pages which will be embraced "In the World of Art and Letters" will be written by leading reviewers and critics of England, France, Germany and the United States. Each of the distinguished men of letters who have been asked to contribute to this department will select what seems to him the most salient feature of the month "in the world of art and letters." To the reader who wishes to keep in touch with the intellectual movement of the world, these brief reviews should prove invaluable. M. Sarcey and Mr. Andrew Lang, respectively the foremost of French and English critics, will be regular contributors to these pages of The Cosmopolitan. M. Sarcey's critique will be given in both French and English.

At the end of the department of Art and Letters a carefully selected list of the twenty most important new books or reprints of the month will be given. These will be chosen after diligent study of the publishers' lists and the books themselves. As human judgment varies widely, and as the task is a difficult one, it will doubtless very often happen that these twenty volumes will not represent

everything of consequence. But, so far as lies within the ability of a committee of three, carefully studying the questions involved and acting in entire good faith, the list will include what is worthiest in fiction, science, art, biography and history.

"The Progress of Science" is intended to supply the requirement for the latest and most important scientific information, prepared, not by one writer who may have a smattering of all sciences, but by a number of leading scientists who are specialists in their respective fields. Each will give that item which he esteems of the greatest importance and widest interest in his own special department—not written at such length as to make the task of reading one requiring time, but carefully stated in the fewest possible words, so as to bring it within the reach of even a very busy mind and saving all unnecessary labor in the effort to keep up with the advance of science. The reader may feel the assurance that, so far as the efforts of men, all distinguished in their own branches of science, go, they are kept within the full range of scientific thought. Among the number of those who will contribute are Prof. C. A. Young, the astronomer of Princeton college; Col. S. E. Tillman, professor of the natural sciences at West Point; Prof. A. E. Dolbear, well known in connection with electrical matters, Mr. G. H. Knight, who has been connected with the progress of invention from the beginning of the United States patent office and is one of the compilers of Knight's Dictionary of Mechanics.

Both "In the World of Art and Letters," and "The Progress of Science" are presented this month in an incomplete form.



T HOUGH this does not seem a propitious season for literature, new books keep coming out, and, one trusts, are read. As usual, fiction is in the front rank, for numbers, and even, perhaps, for excellence. A new writer is always a thing to be thankful for, if the new writer shows promise. There is decidedly promise in Mr. (or Mrs. or Miss) Sidney Lysaght's "Marplot" (Macmillan). The reviews welcome it with some enthusiasm, and there certainly are amusing things in "The Marplot." One is loath to appear as the Devil's Advocate, yet one must confess that, after the opening, les enfances Dick, the tale of Richard and the wandering Conny, ceases to entertain very much. The tale reminds one too closely of Mr. Meredith's Harry Richmond; there is no imitation of Mr. Meredith's manner, and there is no such wonderful character as the old Pretender to the crown, but the scenes of adventurous boyhood, and the strolling Conny do certainly recall Harry Richmond. The author is happier, by far, in comedy than in tragedy, and the tragic element is far from plausible. Still, the book is very much above the ordinary run of new novels.

Mr. Conan Doyle, when he deals with history, always delights us. His "Refugees" (Longmans) treats of a picturesque time: the later years of Louis xiv., the rising star of Madame de Maintenon, the horrors of Iroquois warfare, the exploits of a young backwoodsman. The contrasts are most striking: the old days of Cooper are revived. Scott says that some historical passages are so well done by history that fiction should leave them alone. Unluckily, Mr. Parkman's excellent works on early American life are, one fears, but little known in England. Mr. Conan Doyle acknowledges his obligations to these, and perhaps he has also read the old Jesuit

Relations de la Nouvelle France. He certainly does justice to the bravest men who ever took their lives in their hands. To one's own taste, there is rather too much torture in the novel, and 1 half think there is a slight anachronism about Pascal. But here is a thrilling and carefully studied romance of adventure, fresh, vigorous and manly.

Of Mr. Stevenson's "Island Nights Entertainment" (Cassell) it is almost too late to speak. At last he has given us, in Uma, a heroine with whom we can be, and are, in love, and all the tale is rich in his humor, and his power of giving life to his characters and color to his scenes. But one does prefer him with his foot on his

native heather.

In poetry we have Mr. Watson's "Eloping Angels" (Mathews and Lane), which is less seriously worthy of him than his very earnest and individual "Excursions in Criticism." Mr. Watson is on the side of sober sense, and perhaps, too anti-Elizabethan; but it requires some courage to be anti-Elizabethan, and he has the valor of

tastes which I hardly share.

The new books which I like best are Mr. Grinnell's volumes of "Pawnee and Blackfoot Tales" (Nutt), which far excel any Indian tradition with which I am acquainted. There is a great deal of good, of chivalry, tenderness, courage and fancy in a Pawnee. To anthropologists the books are invaluable, and we all hope that someone will send over one of these astonishing Pawnee conjurers. They outdo Mahatmas in their own province.

Among novelties is the Pall Mall Magazine, which will, no doubt, improve as it grows older. I cannot honestly admire the illustrations, either for design or manner of reproduction; and the page is too broad: the eye grows weary in following the long lines. But a magazine seldom puts its best foot foremost at the start.

Among things unpublished yet, Mr. David Douglas's "Correspondence of Sir Walter Scott" sounds most alluring. Mr. Douglas has made great researches, and

is a most competent editor.

A new ballad (a new old ballad), "The Bluidy Stair," is printed by Mr. Eyre-Todd, in his Scottish Ballad Poetry (Hodge). Alas, I fear that the ballad is not old at all, and it is not likely to pass muster with Professor Child. Mr. Eyre-Todd has been too confiding: if I know an old ballad when I see it. But the collection is well edited and pleasant to one who "loves a ballad but even too well."

In scholarship, St. Peter's Gospel is much discussed, by Dr. Martineau to a tune which I cannot dance by. But this is no topic for these brief notes on the books of the day.

ANDREW LANG.



DOES not Spielhagen, in his last remarkable novel, "The Sunday-Child (Sonntagskind), steer dangerously near to the theory of art which he so vigorously denounces? Fully one-fifth or one-sixth of the three volumes is devoted to an elaborate indictment of the so-called modern realism, in art as in literature, and a defense of the opposite or idealistic tendency. Spielhagen's favorite character, the plebeian who is a natural son of a nobleman, does, to be sure, make his appearance in "The Sunday-Child;" but it is a brief and fitful appearance, and no conspicuous rôle is assigned to him. The hero, Justus Arnold, the son of the princely bastard, makes,

in love as in matrimony, the experiences which fall to the lot of the majority of men similarly situated. He did not lead his fascinating Isabel to the altar in a blaze of glory and "live happily ever afterwards," as married people always did in the irresponsible, "idealistic" fairy-tale kind of novel which the modern realistic movement happily has made impossible. It is a matter of small consequence what an author chooses to call himself, or under what banner he chooses to fight, when his fighting is so good as that of Spielhagen. But here, on this side of the ocean, we should be sorely tempted to class "The Sunday-Child" under the category of realistic novels. For we do not here take Zola and his confrères as the only representatives and exclusive exponents of realism, but merely of an extreme and exaggerated phase of it. Howells and James, who are fully as representative, do not ignore all that is good and beautiful in life, nor do they bolt the gates of hope and depict only the brute in man. But they insist that the novelist should chronicle his own age, as he sees it; that he should portray typical characters and conditions, and, broadly speaking, remain faithful to the logic of reality.

Judged by this standard, Spielhagen practises his art in a realistic spirit. The relation between Justus and Isabel, in all its passionate fluctuations, is admirably typical, and results inevitably from the collision of two characters thus constituted. How darkly and yet exquisitely feminine is Isabel in the intricate mixture of her noble and her ignoble qualities! The subtle appreciation of these finest shades and nuances of character has never been the forte of romantic authors. With them, a woman is usually labeled good or she is labeled bad; the villains, male or female, are as black as the hero and heroine are apt to be dazzlingly white, and each thus furnishes a sufficiently glaring foil to the other. But, as we all know, in life these extremes are rare. It is the intermediate types, which are neither strikingly good nor strikingly bad, that constitute the vast majority of civilized mankind, and it is these in whom the realistic novelist is primarily interested.

In "The Sunday-Child" we have a long and admirably distinct gallery of such every-day figures, all individualized with a vividness and force which leaves nothing to be desired. There is that accent of truth in them, that note of reality, without which no greatness is attainable in the field of fiction. For without it, the novel is but an irresponsible play of fancy.

H. H. BOYESEN.



It does not often happen that a book written correctly for scholars is equally acceptable to that calumniated nondescript, the general reader. But as the Iliad and the Odyssey belong to the whole world, and are as much the treasure and the delight of the unlearned as of the learned, so Mr. Lang's "Homer and the Epic" should be welcome to all who have a natural, wholesome desire to believe in the unity of the Homeric poems. This cannot be a matter of indifference to anyone who has heart, or brains, or imagination, or sympathy with human life and action. Homer, "the golden poet," means something to each of us; and in these days of thin and farspread education, when extension lecturers make cheerful, off-hand allusions to the Iliad as a mere collection of Greek lays, it is well to be gladdened occasionally by a brave and timely word of warning and defense.

Mr. I,ang's position is a very simple one. He believes with Mr. Arnold, that never yet has a great artistic masterpiece been the work of many hands. He believes with

Goethe, that "the man lives not, nor ever shall be born, who can destroy the indivisible unity of the Iliad." He is "on the side of the poets," yet does not base his arguments upon their unerring allegiance. With infinite patience, with generous zeal, with restrained humor, he examines one commentator after another; Wolz, Leaf, Kirchhoff, Niese, and Wiliamowitz Moellendorff, testing each point they offer. The ingenious habit, common to them all, of excising every word which inconveniences their theories meets with scant tolerance at his hands. He objects with all the force of his nature to the dogmatism which sets students hewing and hacking at will, each one deciding confidently for himself what lines shall be permitted to remain. "Homer," he reminds them, "sang for warriors, not for spectacled young German critics on their promotion."

It is a gallant book which Mr. Lang has given us; a splendid indication that enjoyment has not severed herself wholly from scholarship; that poetry still holds her own in our dismal world, that faith is not yet dead.

AGNES REPPLIER.



ONE result already flowing from the Columbian exhibition is the popularization of sculpture in all its phases—from statues of heroic size down to the simplest panelling in low relief—for purposes of decorative effect. Being directed and executed by artists of eminent ability, the Chicago work has been done excellently well; indeed, not since the days when Grecian art flourished—and made one corner of the world very beautiful—has the soul of man conceived and the hand of man realized, on such a scale of stately splendor, a lesson in beauty of form so enlightening and so ennobling as that which these inspired builders have set up for the wonderment and betterment of mankind. But precisely because this work has been so well done is it certain to be very generally imitated—and unless the spirit of imitation can be caught and controlled in time very dreadful things in the way of sculptured horrors assuredly will be crowded thickly over the face of this already much-tormented land; while just as surely, on the other hand, will beautiful sculptures multiply—and with them kindred beauties through all the range of art—if the necessary controlling force be organized promptly and thereafter judiciously applied.

With these facts in view, it will be perceived that a project just now afoot here in New York for organizing a society for the promotion of sculpture has attaching to it more than local interest: in that the principle animating it and the motive actuating it are of as vital importance in every other American city, in every town and village, as they are here. For the animating principle is love of beauty as expressed in form, and the actuating motive is the desire to inculcate this love practically by encouraging the production of sculptures (using the word in its broadest sense) which shall conform to these simple yet searching requirements; and by checking, so far as may be possible, the production of the sort of work which brazenly is at odds alike with

artistic canons and with natural forms

Even a tombstone—in addition to its literary value as a more or less successful work of fiction—has an artistic value in that it teaches a useful lesson, or serves as a horrible example, in form. That the Helot variety largely is in the ascendant in this country anyone may know by taking a turn in the nearest cemetery; where will be found, for the most part, remarks in marble wholly lacking in the grammar, and frequently at issue even with the spelling, of art. In the case of the original Helots we are given to understand (though I always have fancied that this view of the matter

emanated from the Helots themselves and was invented as a plausible palliation of their irregularities) that sight of their iniquitous gayety had upon the Spartan youths a wholesome sobering influence. In the case of the Helot tombstones, however, it is certain that their horrible example is rather more likely to be followed than it is to be shunned. I know, indeed, of one quiet country church-yard that never has recovered from the demoralizing influence of an atrociously carved lamb that was set up in it nearly forty years ago. Lambs defiant of every rule of agnean anatomy have continued to multiply in that church-yard from that day to this.

I cite tombstones for my present purpose, because a tombstone is the one piece of sculpture that each of us fairly may expect to possess individually; and which each of us therefore reasonably may ask to have made in such a way that chance strangers in future times, contemplating this slim memorial of our faded personalities, may not fall to ironic laughing above our bones. But the principle involved in the desire to escape sepulchral ridicule covers also a much wider field; so wide, indeed, that in order to assure general mortuary propriety there must be a great spreading abroad of that especial knowledge which enables its possessors to distinguish between good

art and bad.

The purpose of the New York society for the promotion of sculpture will be, as will be the purpose of similar societies elsewhere established, the diffusion of this special knowledge—with a resulting development of intelligent artistic perception and good taste. Even by way of Chicago the millenium, as a whole, is not likely to arrive ahead of schedule time. But the advent of the artistic section of this desirable period certainly can be greatly accelerated by thus judiciously stimulating a love for the beautiful, and at the same time urgently curbing the tendency toward ugliness that is one of the insistent evils of our race and time. THOMAS A. JANVIER.

TWENTY BOOKS OF THE MONTH.

FICTION.—JEAN BERNY, SAILOR, by SCIENTIFIC AND ECONOMIC.—THE Pierre Loti. Cassell Pub. Co. \$1.00. THE SCALLYWAG, by Grant Allen.

Cassell Pub. Co. \$1.00.

THE MILLION POUND BANK NOTE, and Other Stories, by Mark Twain. C. L. Webster & Co. \$1.50.

LAY DOWN YOUR ARMS, by Bertha von Suttner. Longmans, Green & Co. \$1.75.

THE DICTATOR, by Justin McCarthy. Harper & Bros. \$1.25.

ALL ALONG THE RIVER, by M. E. Braddon. Cassell Pub. Co. \$1.00.

PARSON JONES, by Florence Marryatt.

Cassell Pub. Co. \$1.00. CRITICAL.—THE VICTORIAN AGE OF ENGLISH LITERATURE, by Mrs. Oliphant. Tait, Sons & Co. \$3.00.

THE NOVEL. WHAT IT IS, by F. Marion Crawford. Macmillan & Co.

ENGLISH PHARISEES, FRENCH CROCO-DILES AND OTHER ANGLO-FRENCH AND TYPICAL CHARACTERS, by Paul Blouet (Max O'Rell). Cassell Pub. Co. 50 cts.

EXCURSIONS IN CRITICISMS, by William Watson. Macmillan & Co. \$2.00, PRINCIPLES OF ETHICS. (Vol. 11.), by Herbert Spencer. Appleton & Co.

LIFE AND LABOR OF THE PEOPLE IN LONDON, edited by Charles Booth. Macmillan & Co. \$1.50.

THE NATIONALIZATION OF HEALTH, by Havelock Ellis. G. P. Putnam's Sons. \$1.50.

THE INDEPENDENT TREASURY SYS-TEM OF THE UNITED STATES, by David Kinley. T. Y. Crowell & Co. \$1.50.

HOMES IN CITY AND COUNTRY, by Russell Sturgis, Donald G. Mitchell and others. Chas. Scribner's Sons. \$2.00. BIOGRAPHICAL.—SIXTY YEARS OF AN

AGITATOR'S LIFE, autobiography of George Jacob Holyoake. G. P. Putnam's Sons. \$6.50.

WAGNER AND HIS WORKS, by Henry T. Finck. Chas. Scribner's Sons. \$4.00. ART.-ART OUT OF DOORS, by Mrs. Schuyler Van Renssalaer. Chas. Scrib-

ner's Sons. \$1.50.

SPORT. - THE WILDERNESS HUNTER, by Theodore Roosevelt. G. P. Putnam's Sons. \$4.00,

THE PROGRESS OF SCIENCE.



THE development of electrical industries in the last few years has been chiefly due to the perfection of the dynamo as a generator of electricity rather than to the discoveries of new principles. As a machine the dynamo is nearly perfect, but behind it is the steam engine which is relatively imperfect and wasteful. If it were as efficient as the dynamo one pound of coal would maintain an are light all night and a hundred glow lamps where now there are but ten. So one must look for improvements in the generation of electrical currents as well as in methods of utilizing them. There is more to be hoped for from the side of chemistry and the galvanic battery, for the important elements carbon and oxygen are abundant enough. Now that Dewar has succeeded in solidifying the latter it may be that a binding post can be fixed to it which is impossible in a gas. On the other hand the work of Hertz and Tesla have made it appear probable that present ways of producing light may very soon be as antiquated as is the tallow dip.

The wants of men have always been beyond their ability to supply them. Primitive man employed animals to a small extent, and civilized man supplements these with the power of wind, water, steam and lately of electricity. How much civilization is dependent upon these is beyond reckoning, but it is certain that safety, comfort and leisure depend largely upon making the unnerved energies of nature do our

needful work.

Wind, water and steam can at best turn a crank, so their usefulness has been largely of a mechanical sort, but electricity has endowments of a higher order and is not restricted to a single talent. It cannot only turn the crank of a motor, but it glows like the sun in an arc lamp, in its furnace it fuses the most refractory substances, it can freeze as well. It can talk in a telephone, do chemical work in a tank, make magnets of iron and steel, produce ether waves like light, affect other bodies at a distance, and, acting physiologically, will kill or cure a man. Such a gifted genii is not to be compared with the common cry of servitors, and there is little wonder that everybody is as anxious as the old Athenians to learn what new thing is next to be expected.

A. E. Dolbear.



HE astronomical event of the season was the total eclipse of the sun on April 16th. The observing stations were in northern Chili, in Argentina near Tucuman, at Ceara on the Brazilian coast, and in Senegambia.

The observations were unusually successful, especially in Chili and Africa: the party in Argentina was the only exception. The English party near Ceara "observed the eclipse under favorable circumstances," but no details are yet received. Pro-

fessor Thorpe in charge of the English party at Fundium, Senegambia, telegraphs that the weather was fine excepting a slight haze; that successful observations were made with all the spectroscopes, both visual and photographic, as well as with the photometers, and that excellent photographs of the corona were obtained. Two of the French observers were also at Fundium, and we may safely assume that the other French parties near Joal shared the success, although as yet we have no direct report from them.

In Chili, the Harvard party under Prof. W. H. Pickering was at Mina Aris, about forty miles inland and at an elevation of over four thousand feet. He reports the weather as "all that could be desired," and that besides a full series of photographs of the corona, they obtained an unprecedented success in a good negative showing twenty of the bright lines in the spectrum of the so-called "reversing layer" of the sun's atmosphere. Professor Schaeberle, of the Lick observatory, was at Mina Bronces, not many miles away, but two thousand feet higher. He was equally successful, getting nearly fifty coronal photographs of various sorts. Six of them show the corona covering a space ten inches by twenty, a size hitherto unapproached.

It would be premature to announce conclusions before we receive the full reports, but it is practically certain that several important and long-debated questions will be finally settled.

C. A. YOUNG.



THE fond hope of the alchemists, the transmutation of the baser metals into gold, has nearly faded from the minds of men, but the assiduity of the chemists in their efforts to imitate artificially the beautiful products of nature was never greater. Since Lavoisier and his associates, in 1772, proved that the diamond is only a form of carbon, many efforts have been made to produce it artificially, by the transformation of some of the more common forms. These efforts have met with varying degrees of success. Several experimenters have produced the black diamond, but only once before has the crystallized, transparent variety been produced. This was accomplished by Hannay, but his method involved physical arrangements difficult to meet, and has not been pursued.

M. Moissan has now announced a new method for the artificial production of the diamond. It has long been thought that if the ordinary forms of carbon could be converted into a liquid or gas, that they then might be made to solidify as diamonds. But there is no way known of directly converting carbon into a liquid or gas. Moissan took advantage of the property possessed by melted iron of absorbing and diffusing carbon throughout its mass. He saturated the highly heated iron with carbon by infusing into it a quantity of purified sugar. By suddenly cooling the melted metal, he formed a solid crust over the still liquid interior. As the mass continued to cool, the interior gradually solidified, but it was prevented from expanding by the rigid exterior. The interior was thus compelled to solidify under enormous pressure. During the process of hardening, the carbon solidified, in part, as diamond, instead of graphite, as is usually the case in the cooling of melted iron.

The quantity of diamonds thus produced was small, and the crystals themselves were small, but they were clear and transparent and seemed to possess all the beautiful properties of the natural gems. The experiment has already excited the curiosity and interest of many people, and the simplicity of the method will probably induce many to attempt the production of the precious stones. It is, however, safe to predict that much time and labor will yet have to be expended before marketable-sized jewels can be produced.

The scientific import of the discovery is, however, great and of immediate bearing. It is an important success in the efforts of scientific men to reproduce the rarer of the natural mineral products. The diamond, ruby, quartz, feldspar, mica, pyroxene, hornblende, have all been made in the laboratory. The experiments are very suggestive as to how the same minerals were made in nature. Moissan's experiment throws strong

light on the condition of the carbon in melted iron, a question of great practical import. Finally, the discovery suggests additional information as to the processes going on beyond our earth, which sometimes send meteorites to us laden with diamonds; within the earth, by which reservoirs may be filled with natural gas. The discovery widens the field for the transformation of matter and increases, as well, the possibility of interpreting the secrets of the mineral world.

SAMUEL E. TILLMAN, Col. U. S. A.



THE reader who desires to keep in touch with current progress in the useful arts, will find, in this and subsequent issues, under the above caption, a brief presentation of some one or more recent inventions, that appear specially noteworthy for any cause, such, for example, as the brilliancy or the creative character of the discovery, or the fact that it promises to be of great utility, or to open up a new field of industrial activity. * will, however, be remembered that the conspicuously epochal creations are few and far between, and that the more notable achievements of human ingenuity customarily reach perfection by so many almost infinitesimal steps—the contributions of many minds—that it becomes difficult to determine just where speculation merges into that concrete realization which the world agrees to call invention.

The life-history of most inventions shows, at first, a gradually increasing complexity of structure, up to a sort of "clinal divide," whence it descends into a refined simplicity, which recalls—without being identical with—the germinal conception. Thus, just when quadruple expansion seemed to have given the consummate touch to steam engineering, comes the surprise of the "steam turbine" of the English inventor, Parsons, having no more complexity than a Boyden water-wheel, and whose extreme fewness of parts (neither valve, piston, pitman, connecting-rod crank, nor fly-wheel) reminds one of the little steam toy of the old Alexandrine philosopher

(Hero) of 200 B. C.

Recent trials at Newcastle-on-Tyne of this unique motor, under the auspices of J. A. Ewing, professor of engineering of Cambridge university, England, elicited the following extraordinary results: The consumption of steam-alike at half and at full loadsis, per foot-pound, about the same as in a well-designed compound engine. It is a notable and interesting fact that this miracle of simplicity solves, at a single bound, often striven after, but never satisfactorily accomplished to himself (that is, economically) by James Watt-a rotary steam engine. Owing to its high speed and its rotary motion, the device seems admirably fitted for dynamo propulsion; and we find, that, in the test mentioned, the "steam turbine" was attached to the shaft of a powerful dynamo of the alternating current type-turbine and armature revolving together, with a velocity of 4800 revolutions per minute, generating a potential of 2000 volts, with a yield of 100 kilowatts (100 board of trade units) of electrical energy per hour. A remarkable fact, taken in connection with the high velocity, was the low steam pressure, ninety-five pounds per square inch, employed; and still another was, that, although the engine rested on a simple concrete floor, without hold-down bolts or special foundation, the machine ran almost without vibration. In the test mentioned the steam exhausted into a condenser—a refinement on Mr. Parson's previous structures of the same type, which discharged into the air, GEORGE H. KNIGHT.

SOME SANITARY ASPECTS OF BREAD MAKING.*

BY CYRUS EDSON, M.D., Commissioner of Health, New York City.

is necessary, if one would under- that yeast is germ growth, and when inthe part played by them in disease. I am able to put this somewhat more strongly. The theory of disease germs is merely the name given to the knowledge had of those germs by medical men, a knowledge which is the result of innumerable experiments. is a plant, so small that I do not know how to express intelligibly to the general reader its lack of size. When this germ is introduced into the blood or tissues of the body,

its action appears to be analogous to that which takes place when yeast is added to dough. It attacks certain elements of the blood or tissues, and destrovs them, at the same time producing new substances. After yeast has fermented a "batch" of dough, it can never again effect fermentation in that same batch, because it has exhausted or destroyed the material necessary to its action. So it is also with certain germs, as those of smallpox for example. After they have once worked in a human body

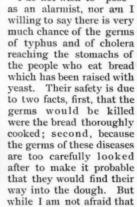
This rule has very few exceptions.

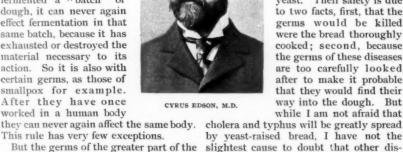
But the germs of the greater part of the germ diseases, that is, of the infectious and contagious diseases, will develop or increase in number without being in the body of a human being, provided always ing from cutaneous diseases, working the you give them the proper conditions. These conditions are to be found in dough which is being raised with yeast. They are warmth, moisture and the organic very short order. I have no reason to matter of the flour on which the germs, suppose bakers are less liable to cutaafter certain changes, feed.

stand the sanitary aspects of bread troduced into a mixture of glucose or making, to fully comprehend the present starch in the presence of warmth and theory held by scientists of germs and moisture sets up a fermentation. If the mixture be a starchy dough the yeast first changes a portion of the starch into glucose and then decomposes the glucose by changing it into two new substances, viz., carbonic acid gas and alcohol.

Now the gluten, which is also a constit-Being this, the old term of a "theory" has uent of dough and moist starch, affords, become a misnomer. A germ of a disease with the latter, an excellent nidus for the development of germs of disease as well as for the yeast germs. The germs of cholera, as of typhoid fever, would, if introduced into dough, find very favorable conditions for their growth.

I do not wish to "pose"





in the bread. I have met journeymen bakers, sufferdough in the bread trough with naked hands and arms. I suppose I need scarcely say this was put a stop to in neous diseases than are other men, and I It is necessary to remember at this point know, as every housewife knows, yeast-

eases have been and will be carried about

ADVERTISING SUPPLEMENT.

raised bread must be worked a long time. This is an exceedingly objectionable thing from the standpoint of a physician, for the reason that the germs of disease which are in the air and dust and on the stairways and straps in street cars, are most often collected on the hands. So well do physicians know this that there is no ablution practical equal to that which they undergo before they perform any kind of surgical operation. Any person who has ever kneaded dough understands the way in which the dough cleans the hands. In other words, this means that any germs which may have found a lodging place on the hands of the baker before he makes up his batch of bread are sure to find their way into the dough, and once there, to find all the conditions necessary for subdivision and growth. This is equivalent to saying that we must rely on heat to kill these germs, because it is almost certain that they will be there. Now, underdone or doughy bread is a form which every man and woman has seen.

No one but a physician would be apt to think of disease germs which have not been killed during the process of baking as a cause of the sickness following the use of uncooked yeast bread. Yet this could we trace back some of the cases of

illness which we meet in our practise we would find that germs collected by the baker have found their way into the veast bread, that the heat has not been sufficient to destroy them, that the uncooked yeast bread has been eaten and with it the colonies ofgerms, that they have found their

way into the blood and that the call for our services which followed, has rounded off this sequence of events.

I have already pointed out that the germs of disease are to be found in the air and dust. The longer any substance to be eaten is exposed to the air, the greater the chance that germs will be deposited on it. Bread raised with yeast is worked down or kneaded twice before being baked and this process may take anywhere from four hours to ten. It has, then, the chance of collecting disease germs during this process of raising and it has two periods of working down or kneading during each of which it may gather the dirt containing the germs from the baker's hands or feet. As no bread, save that raised with yeast, goes through this long process of raising and kneading, so no bread, save that raised with yeast, has so good a chance of gathering germs.

What is meant by "raising" bread is worth a few words. The introduction of the yeast into the moist dough and the addition of heat when the pan is placed near the fire produces an enormous growth of the yeast fungi-the yeast "germ" in other words. These fungi effect a destructive fermentation of a portion of the result from this cause is more than proba- starchy matter of the flour-one of the ble. I have not the slightest doubt that most valuable nutrient elements in the flour. The fermentation produces car-



ADVERTISING SUPPLEMENT.

in every little particle of the starch which is itself everywhere in the flour, pushes aside the particles of the dough to give itself room. This is what is called raising the bread.

It needs but a glance to see that it is,

in its effects on the dough, purely mechanical. dough, which was before a close-grained mass, is now full of little holes, and when cooked in this condition is what we ordinarily call light. This porous quality of bread enables the stomach to rapidly and easily digest it, for the gastric juices quickly soak into and attack it from all sides. The fermentation of the dough, however, uses up a portion of the nutrient elements of the loaf. If it be possible, therefore, to produce a light porous loaf without this destruction and without the kneading "process," which fills the dough with germs and filth, and without the long period during which the raising process goes on,

the gain in food and the gain in the avoidance of the germs is exceedingly plain. It is so plain that many methods of making bread have been tried.

But while we can easily see the dangers which attend the use of yeast, it is certain that the vesiculating effect produced by it on the dough is to the last degree perfect. By this I mean that every particle of gluten produces its little bubble of gas, and that, therefore, the bread is properly raised, - that is, it is raised everywhere. It is apparent that if we are to substitute any other system of bread making we must have one which will give us, first, mechanical results equally as good, that is, that will produce minute bubbles of carbonic acid gas throughout the mass of dough. Now it is in no way difficult to produce carbonic acid gas chemically, but in making bread we must use such chemicals as are perfectly healthful. Fortunately these are not hard to find.

The evils which attend the yeast-made bread are obviated by the use of a properly made, pure and wholesome baking of heat and moisture produce carbonic acid

bonic acid gas, and this, having its origin powder in lieu of yeast. Baking powders are composed of an acid and an alkali, which, if properly combined, should, when they unite, at once destroy themselves and produce carbonic acid gas. More than that, they should be made in such fashion as to be very fine powders.



BREAD WITHOUT YEAST —"THE MOST PERFECT CONCEIVABLE METHODS OF RAISING IT."

so that when thoroughly mixed with the flour there will be only a very small bubble of gas created in any one place. A good baking powder does its work while the loaf is in the oven, and having done it, disappears.

But care is imperative in selecting the brand of baking powder to be certain that it is composed of non-injurious chemicals. Powders containing alum or those which are compounded from impure ingredients, or those which are not combined in proper proportion or carefully mixed and which leave an acid or an alkali in the bread, must not be used.

It is well to sound a note of warning in this direction or the change from the objectionable yeast to an impure baking powder will be a case of jumping from the frying pan into the fire.

The best baking powder made is, as shown by analysis, the "Royal." It contains absolutely nothing but cream of tartar and soda, refined to a chemical purity, which when combined under the influence raise large bread perfectly. Its use avoids the long period during which the yeast-made dough must stand in order that the starch may ferment and there

is also no kneading necessary.

The two materials used in the Royal, cream of tartar and soda, are perfectly harmless even when eaten. But they are combined in exact compensating weights, so that when chemical action begins between them they practically disappear, the substance of both having been taken up to form the carbonic acid gas. More than this, the proper method of using the powder insures the most thorough mixing with the flour. The proper quantity being taken, it is mixed with the flour and stirred round in it. The mixture is then sifted several times and this insures that in every part of the flour there shall be a few particles of the powder. The salt and milk or water being added, the dough is made up as quickly as possible and moulded into the loaves.

These are placed in the oven and baked. But the very moment the warmth and moisture attack the mixture of cream of tartar and soda, these two ingredients chemically combine and carbonic acid or leavening gas is evolved. The consequence may be seen at a glance. The bread is raised during the time it is baking in the oven and this is the most perfect of all conceivable methods of raising it.

Here, then, there is no chance for germs

gas, and having done this, disappear. Its of disease to get into the dough and leavening strength has been found supe- thence into the stomach; more than that rior to other baking powders, and as far as the bread is necessarily as sweet as pos-I know, it is the only powder which will sible, there having been no time during which it could sour. This involves the fact that the bread so made will keep longer, as it is less likely to be contaminated by the germs that affect the souring process.

During the coming summer we shall have cholera knocking at our gates, and it remains to be seen whether it will get in. It will be strange if the crowds of visitors to the World's Fair do not greatly increase the number of cases of contagious disease, which we will have to treat. Under these circumstances is it not folly of follies to open a single channel through which these germs may reach us? Is it not the part of wisdom to watch with the greatest care all that we eat and drink, and to see that none but the safest and best methods are employed in the preparation of our food? To me it seems as though there could be but one answer to questions like these.

I have shown the danger of using the yeast-raised bread, and with this I have shown how that danger may be avoided. The ounce of prevention which in this case is neither difficult nor expensive, is certainly worth many pounds of cure, and the best thing about it is that it may be relied on almost absolutely. Those who, during the coming summer eat bread or biscuits or rolls made at home with Royal baking powder may be sure they have absolutely stopped one channel through

which disease may reach them.

